

THE DENTAL DIGEST

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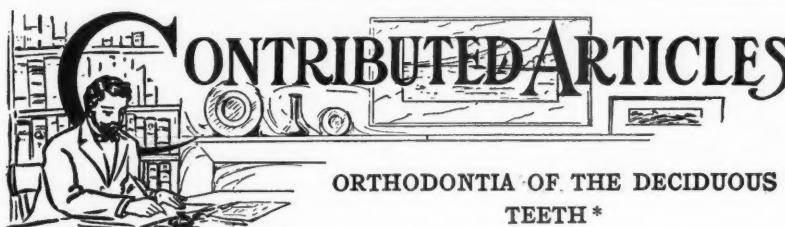
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ORTHODONTIA OF THE DECIDUOUS TEETH *

By E. A. BOGUE, M.D., D.D.S., NEW YORK CITY, N. Y.

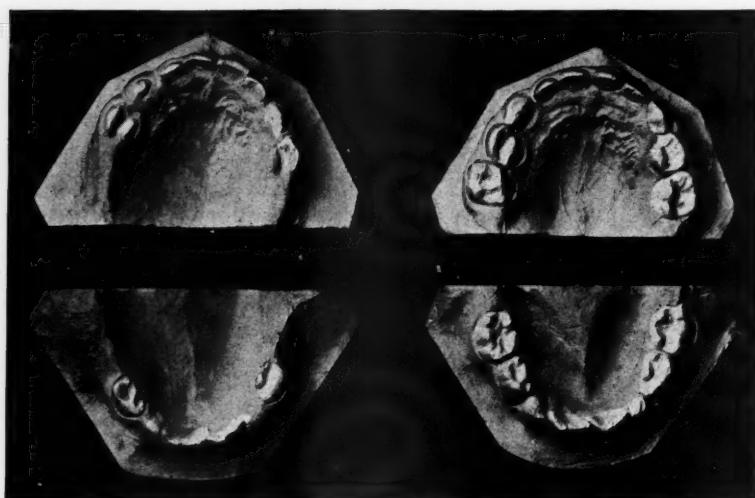
Third Paper

To dentists whose eyes have been fixed on the correction of irregularities of the permanent teeth, and who have been accustomed to await the eruption of certain such teeth before beginning, the correction of irregularities in the temporary teeth may seem like an effort to carry dentistry to the very cradle. Both its wisdom and necessity may be questioned. But I think it can be shown that most irregularities of the permanent teeth are results rather than causes; that they are usually the end products of causes which became operative long before the permanent teeth erupted. If that can be shown and the operating causes made plain, it becomes a simple matter of practice that the operation of such causes should be stopped as early as possible and any harm they may have worked be corrected as soon as may be.

I have already set forth, in a previous paper of this series, my belief that the causes of the deformities become operative much earlier than

* These articles were commenced in the October issue.

we have generally taken cognizance of. And I regard it as one of the greatest lessons learned in a long life of practice that in order to secure the full benefit, such correction must be completed by the time the patient reaches the age of six, or at most seven years. This means that the corrections must be made in the positions of the temporary teeth. If these corrections are not made, the permanent teeth, when erupting, follow the size and general arrangement of the temporary arch. If Nature had not the vigor to spread the temporary teeth apart, and thus enlarge the temporary arch into the anterior segment of the perfect adult arch, she will not have sufficient vigor to move the permanent teeth, which were compelled by malpositions of the temporary teeth to erupt irregularly, into the form of a perfect arch.



Left-hand model of Dr. J. C. H.'s eighteen-months' baby. Note irregularities of teeth. Right-hand model, same child at two years eight months. Irregularities still more pronounced.

It will be well to here review briefly the causes which give form to the dental arches, to get clearly in mind what constitutes normality in positions of the teeth at different ages, and to so define abnormalities of the teeth that we may at once recognize them as such.

The dental arches of the child are given form by the action of the tongue and cheeks. When such action is normal the arch is at least approximately perfect. When the action of the tongue or cheeks is abnormal, the dental arches are either pressed into abnormal form or are prevented from developing as they should. The teeth in such arches

are necessarily irregular, not through any activity of their own, but as the result of forces operating outside themselves. These causes often become operative during the first months of life. And their evil effects become visible as early as the age of eighteen months, in irregularities of the temporary teeth. (See page 672.)

Let us see how the cheeks and tongue shape the dental arches. The very first step in such a study takes us away from the mouth and into the nose. For the normal action of the cheeks and tongue is dependent on the child being able to get sufficient air through the nose with the mouth closed.

In perfect health, the mouth remains closed, usually without conscious effort to that end. The body of the tongue then lies in the floor of the mouth, but its dorsum is sucked up against the hard palate. As the teeth erupt, they are pushed outward by the pressure of the sides of the tongue until the pressure is equaled by the inward pressure of the cheeks. The suction between the dorsum of the tongue and the hard palate flattens the roof of the mouth. If these forces operate normally, the teeth are formed into perfect arches without other attention. The rarity of perfect tooth alignment, even among small children, is the best evidence of how few are the cases in which such action is normal.

But if the air passage through the nose is not large enough so that the child easily secures enough air through it with the mouth closed, the mouth will be opened for breathing. All the forces which tended to give perfect form to the dental arches are then perverted. The tongue no longer rests in the roof of the mouth and pushes the teeth outward to proper positions. The mandible, which under normal conditions is supported by negative atmospheric pressure without pull on the cheeks, is now a weight supported by the cheeks. Under this pull, the cheeks are drawn in flatter than normal, and they push the teeth inward or prevent the arch from expanding in the section near the cuspids. The teeth, thus pushed inward, are not supported by the outward push of the tongue. An abnormal form of the dental arch results, with the teeth in malpositions. The teeth may be more or less rotated on their axes, or they may be inclined to one side of the dental arch, or the upper teeth may close inside the lowers, or one or more incisors may overlap other teeth.

If when the child is five years old the temporary incisors stand close together, each tooth touching its neighbors on both sides, and if they continue thus to the age of six years or later, it is a form of irregularity. For normality requires that at about the age of four years the temporary incisors should begin to separate by the enlargement of the temporary dental arch, until the incisors and the spaces beside them

nearly equal the width of the permanent incisors which are to erupt there. If such separation has not occurred at the age of six years, it is an evidence of an arrest of development, which carries unfailing promise of irregularities among the permanent teeth which evidently cannot erupt properly in a space too narrow for them.

Other causes of perverted action by the tongue and cheeks become operative very early in the child's life. Some of these causes, such as adenoids, colds, coryza, etc., tend to diminish the air passages of the nose. In my opinion, artificial feeding of infants predisposes to mouth



Mary D.—Model closed. This child, noticing her father and older brother both closing the lower teeth forward, imitated them at the period when the articular eminence of the temporo-maxillary articulation was undeveloped and the groove of the glenoid fossa was shallow, so she could easily throw the mandible forward, and acquire the habit of closing forward, which she did, misplacing the anterior teeth, but leaving the principal molars all the time correctly occluded. The habit was fixed, and was only broken up by orthodontic interference, lasting nearly two years.

breathing. The nursing child bites the breast rather than sucks, in getting nutriment therefrom; the resiliency of the breast aids in the enlargement of the dental arches. In artificial feeding, this necessary pressure is lacking.

Beside that, it is claimed that the product of the thyroid gland is necessary to the appropriation and fixing of lime salts in the body, and unless the child is nourished for a time at least by its mother's milk, it is deprived of the thyroid furnished by that milk, and cannot get it from any other source; hence, adenoids are liable to occur from an effort of nature to supply vicariously through the adenoid a secretion that is lacking and that cannot be procured from the natural sources, namely, thyroid. This is the view of Leonard Williams, of England. Herbert Waller, also of England, in his work on "The Theory and

"Practice of Thyroid Therapy," declares that "Thyroid inadequacy is responsible both for adenoids and dental caries," though he does not point out what I have been trying to show in this paper, that the condition which predisposes to adenoid is a condition of cardiac weakness that tends toward defective or deficient formation of the enamel protection on the teeth, and so indirectly tends to dental decay.

Any cause which withdraws the tongue from its normal position in the roof of the mouth, for any length of time, permits the cheeks to press the side teeth inward, and throws the anterior teeth forward in proportion as the side teeth are forced in upon the space that should properly be occupied by the tongue.

Abnormal habits of closure of the jaws may begin very early in life. Once, on the train, I saw a child two and a half years old spend the afternoon in an effort to project the mandible so as to close the



Donald M.—Age four and one-half years. Models of the mouth at this age; also ease of habit, resulting similarly to ease on page 674, but corrected earlier.

A lack of fullness will be noticed in the region of the upper lip.

lower front teeth outside the upper incisors. When this had been done, the lower teeth were drawn backward across the uppers. This was a deliberate activity tending to reduce the size of the upper arch and render the lower jaw prognathous.

Other similar habits have unfortunate consequences. Among these may be mentioned biting of the lips or tongue, protruding the tongue or keeping it pushed firmly in one direction, or a cross closure of the jaws.

This paper may well close by making plain the effect upon the

permanent bicuspids and molars of the narrowing of the deciduous dental arches. The first permanent molar almost invariably erupts in the line of arch as established by the deciduous molars. This is natural because the same forces which guided them to place guide this molar to place. The crowns of the bicuspids are formed between the wide-



James D.—Four and one-half years old: side view closed, cross bite; exhibiting narrowed upper arches, closing lingually to the lower arch, and treated by gradual expansion, with No. 20 wire.

spreading roots of the deciduous molars. And where the deciduous molars are, the bicuspids will come. Get the effect of that statement in mind. The deciduous teeth establish the line along which the permanent teeth will erupt. If these teeth are in malpositions, it follows naturally that the permanent teeth will erupt in malpositions. If the direction of the forces which caused the malpositions of the deciduous teeth has not been corrected, the permanent teeth will be held in these malpositions. If the permanent teeth be carried to proper positions without the correction of the misdirecting forces, they will be carried

back into those malpositions by the very forces which first placed them there, as soon as the retainers are removed, whether that be at the end of two years or twenty.

Does it not seem then to be intelligent practice to first of all correct the action of the forces which shape the dental arches, and that as early in the life of the child as may be?



Mary P.—Eight years old, side view closed, cross bite. Both exhibiting narrowed upper arches, closing lingually to the lower arch. Treated by rapid expansion, by screw spreading upper arch $\frac{1}{2}$ of an inch.

And does it not seem like intelligent practice also to carry those arches out to perfect form during the years when it may be done easily, quickly, and painlessly? Above all, does it not seem to be the very best practice to do this, when, by so doing, the eruption of the permanent teeth in practically perfect positions is secured?

63 WEST FORTY-EIGHTH STREET.

(*This article is expected to be continued in the January number.*)

KEEPING UP THE VIGOR OF MATURE LIFE

SUSTAINED EFFORT

BY ALONZO MILTON NODINE, D.D.S., NEW YORK

The lamp of our youth will be utterly out,
But we shall subsist on the smell of it.
And whatever we do, we shall fold our hands
And suck our gums and think well of it.
Yes, we shall be perfectly pleased with our work,
And that is the perfectest Hell of it!

(Collected Verse of Rudyard Kipling, "*The Old Men.*")

Sustained effort—the solution of this problem isn't found by complacently, irresponsibly leering on the passing pageant of Youth, Activity and Common Sense. Yet, if those old bromides—"A man is as old as he feels," "A man is as old as he thinks," "Is life worth living?" "That depends on the action of your liver," "A man is as old as his arteries," "Get the kink out of your colon!" "An athletic rectum is a joy forever," "Clean out, clean up and keep clean"—have each a dash of trenchant truth, then the solution, the remedy, may be found in a sensible blend of these several ingredients.

Powerful and governing is the mental attitude in the conduct of life. So truly so that G. Bernard Shaw's wit strikes one's mental funny-bone with stinging force when he writes, "Except during the nine months before he draws his first breath no man manages his affairs as well as a tree does."

Most men begin to jell or petrify between forty-five to fifty years. The process is most frequently noticed first in the contents of the brain box. The cultivation of a progressive and diversified mental activity is one of the elemental fundamental motors that keep up vigor.

When a man arrives at the age of discreet indiscretions his house ought to be in order like

"The wonderful one-hoss shay
That was built in such a logical way
It ran a hundred years to a day."

Since man's body is the battlefield on which clash the forces of life and dissolution, enlist your energies on the side of life.

The battle of preservation, as those battles of war, is fought with arms and stomachs, too. A cake of chocolate gets the decision in more instances than in "Arms and the Man."

The battle for supremacy in our bodies is one in which up-to-date and down-to-now equipment and ammunition are used—chemical muniments, projectiles, and rations, the made-while-you-fight *kind*, are supplied to both sides. The goal is the possession of the laboratory. The force having the annihilating chemicals wins, so keep your house in order. The first room in this Night-and-Day Laboratory that ought to be put in order is the mouth and its annex, the nose. In and through the mouth pass all the water, all the food, part of the air, and almost all the poisons that enter the body.

Every sound tooth is an essential, a necessary part of the chemical machinery. Each is designed for a definite specific function and position, and for no other.

With such sound, clean, proper, well-managed, well-worked chewing apparatus, ammunition is manufactured to defend, fortify, and restore the body from any assault or any attack.

When teeth are decayed, diseased, or deranged there is a flaw in the chemical process. Instead of a help they are a hindrance; instead of defenders, they are *insidious* traitors in the camp. They have made a breach in the walls where the enemy may enter in the guise of germs—germs making subtle poisons—ptomaines, toxines, phenols, skatols, indols, the Black Horse Cavalry of Disease and Dissolution.

Such an army marches into and gains possession of the larger chemical laboratories—the stomach, the small intestine, and the large intestine—accompanied by a host of camp followers and sutlers. They use these very laboratories to concoct still subtler poisons which affect the liver, the pancreas, the heart and arteries, and the nerves. As complete a system of organic undermining as could be imagined.

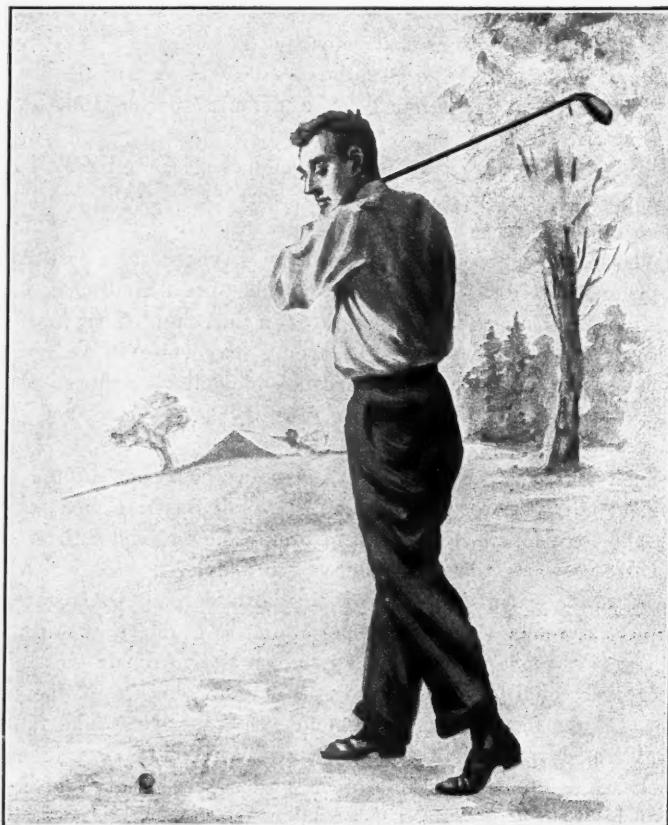
The very foods necessary to strengthen and to repair the tissues—under such conditions—become destroyers and wreckers of their function. These food elements—proteids, carbohydrates, and fats—are disintegrated into purin bodies, lactic, acetic, and butyric acids—which are again built up into other poisons that produce effects ending in high blood pressure, heart trouble, arteriosclerosis, neurasthenia, Bright's disease, torpid liver, and diabetes.

In each room of this manufacturing laboratory an army of occupation is established. In the mouth—that old familiar acquaintance—pyorrhœa alveolaris gives out its supply of pus and infection to the tonsils and stomach. The vicious circle is completed by rheumatic fever, rheumatoid arthritis, and subacute septicaemia.

In the stomach, septic gastric catarrh, gastric ulcer, and cancer may follow. In the small intestine similar lesions are established. In

the large intestine constipation, fecal toxæmia, and appendicitis are common results. How can laboratories thus poisoned transform food into sustained normal vigor?

The reeking tell-tale breath of auto-intoxication convicts the self-poisoner of eating too much nitrogenous food—food containing those poisonous purin compounds.



"Proper bodily exercise—proper bodily exercise that is the result of enjoyable activity found in walking, riding, golf, tennis, baseball."

Hippocrates long ago said, "Old men bear want of food best, then those that are adults, youths least."

"If a man should start out with the express purpose of growing old as rapidly as possible it would be difficult for him to select a shorter or surer route than by overeating of carbon-yielding foods and nitro-

gen-forming compounds."* Eggs and red meats are examples of such foods. The surest natural brake on overeating is the chewing of food thoroughly with a sound, clean, masticating apparatus.

An authority on "The Senile Heart" (Balfour) tells us, "There is nothing so certainly and so much embitters the latter days of life as overindulgence in food."

Look at those old "bromides" again and 'twill be to realize that a sound, clean chewing apparatus is a forceful and positive discourager of Bright's disease and intestinal stasis.

With an active brain and a properly used sound, masticating apparatus, there goes that other elemental factor of sustained effort—proper bodily exercise—proper bodily exercise that is the result of enjoyable activity found in walking, riding, golf, tennis, baseball, etc., completes the third side of the triangle.

Sleep, yes, long hours of sleep for children. But not more than eight, better six or seven, for adults

This triple alliance of activities holds the balance of power so that sustained effort may be carried into the eighties and nineties, as exemplified in Gladstone, Bigelow, Li Hung Chang, Wallace, Lister, Bismarck, Oliver Wendell Holmes, and others.

Do not be pushed over the precipice by apoplexy, Bright's disease, or heart failure.

The dentist in and through his work has the opportunity to guard against early loss of vigor, to support sustained effort, and to prolong useful activity.

It was our fault—and now we must turn it to use:

"We have forty million reasons for failure, but not a single excuse!

So the more we work and the less we talk the better results we shall get—

We have had an imperial lesson; it may make us an Empire yet!"

"The Lesson" (Collected Verse of Rudyard Kipling).

1 WEST THIRTY-FOURTH STREET.

PACKING GUM BACK.—In order to keep the gum tissue from falling over the end of the root after preparation, procure a small tack with a flat head, imbed it in warmed gutta percha, shaped to a point; insert in root canal and press excess of gutta percha around end of the root and forcibly against the gum tissue. Hold in position till it becomes cool. At next treatment the end of the root will be clear for action.—
C. A. K., *Oral Health*.

* A. H. Stewart, *The Dietetic and Hygienic Gazette*, February, 1912.

AN ANSWER TO "A PLEA FOR ELIMINATION"*

BY DR. J. M. B., BERLIN, GERMANY

This article, by a practitioner in Germany, is published without his name, in order that it may not cause him unnecessary annoyance abroad.—EDITOR.

IN the September issue of the DENTAL DIGEST I read an article entitled "A Plea for Elimination," and while I have the opportunity to say a few words regarding the title, "American Dentist or American Dentistry," I take the liberty to write to you, with the expectation that you will be kind enough to give it publicity in your valuable DIGEST.

It is a fact, and the author of the above article is correct in saying that dentistry is dentistry all over the world, and there should not be any distinction between the different countries where dentistry is taught and practised, and there is really no reason why so much should be said of American Dentistry, more than of English, Spanish, French, etc.; yet there are circumstances, as I will mention in the following lines, where an American, English, or Spanish dentist is compelled to distinguish himself from others.

I will demonstrate this; for example, take Germany, where I have practised since the last year. Up to 1897 a foreign graduate dentist was allowed to practise without passing an examination, and was entitled to his degree; in other words, the American was entitled to his D.D.S., the English to his L.D.S., etc. In 1897, however, the German dentists who, by the way, do not receive the degree D.D.S., opened a campaign against the Americans practising in Germany, and succeeded, through the German superior courts, in prohibiting the Americans from using the title D.D.S. and Zahnarzt, although if we open a German-English dictionary we find under Zahnarzt—dentist.

All those that were in Germany at the time this law was put in force in 1897 were allowed to practise and title themselves according to the degree obtained from the institution from which they were graduated. Those that came after were allowed to practise, but the degrees obtained in the different countries were not allowed, so that all are compelled ever since to call themselves "Dentists."

The word dentist in itself, as understood in the States, does not in any way mean disgrace; on the contrary, it means a profession which is valued by those who practise it. In Germany, however, it is not so, and when you say here "Dentist" it means an uneducated man,

* An editorial in *The Dental Review*, 1911, reproduced by THE DENTAL DIGEST, September, 1912.

an individual that has not a preliminary education, nor has he seen the inside of a dental institution, although such men are allowed to practise, as Germany has no laws prohibiting them.

I have, for instance, had the opportunity to converse with one practising in the heart of Berlin, who, seeing my medicine bottles, asked me if I used them all, and when I said that they were there for that purpose, he answered with great astonishment, that he used only three bottles: arsenic, iodine, and creosote, and with these three bottles he treated everything.

Another gentleman practising here asked me one day if I mounted a shell crown on a cuspid tooth as an abutment for an anterior bridge, and when I answered that a Richmond Crown was just as strong if well made, he looked at me and asked me what I meant by a Richmond Crown.

These kind of dentists have gained a little education by working with a Zahnarzt or another dentist for a short time, and then have opened up a practice.

To make myself better understood I will make a comparison between a "Zahnarzt" graduated from a German institution and a "Dentist."

Mr. John Smith, "Zahnarzt," means that Mr. John Smith has studied in Germany beginning with his preliminary education and finished with the university, a man that is entitled to his degree, respected by the layman as a man with education.

Mr. John Smith, "Dentist," means that Mr. John Smith has not the preliminaries; and has not seen the inside of a dental institution, but has assisted a dentist for a while, and established a practice for himself.

Some of these last men are really men of good standing, men that have read much and educated themselves, and gained a good practice; the majority, however, are uneducated, uncultivated men that think that the whole field of dentistry consists in extracting and making an amalgam filling.

The hate between these two classes, that is, between the Zahnarzt and the Dentist, is almost indescribable. Both have official journals attacking each other, and almost every week you can read an article in one of these journals denouncing the others.

The dignity of the Zahnarzt will not allow him under any circumstances to come in contact with a dentist, or to associate with him, just as you and I wouldn't like to associate in the States with a man that has gained some dental practice by working for another dentist, and would call himself your colleague.

Men that are graduated from institutions of good standing in America, England, France, etc., are prohibited from using the degree which was conferred on them, and are compelled to practise under the last class; that is, under the dentist.

The dentists are not allowed to give a prescription if that prescription contains more than Pulvis Saponis, chalk, Pulvis Saccharis, and a few others that escape my mind. Officially the dentist cannot buy any drugs, as far as the poisons are concerned, without the prescription of a medical man, while the Zahnarzt is allowed all these privileges.

These frictions between the German Zahnarzt and the American dentist gave rise to suits, and the superior courts of Germany have decided in favor of the German Zahnarzt, prohibiting the American their D.D.S., so that the Americans that have worked for their degree just as hard as the German are compelled to fall under the dentists.

Naturally, it is insulting to the American dentist's dignity, and he began to think how he could distinguish himself from the other dentists, who has no more than a mere education gained by assisting another dentist for a short time, and he soon came to the idea of adding the prefix "American" Dentist. This is done not to show that the American dentist is a genius or that he is practising a special method or system, but to show the layman that he is an educated man in his profession.

So, for instance, you may read a sign, "John Smith, American Dentist, graduated University of Pennsylvania," this is to show the layman that he is a graduated man from a dental institution. Some of them have their signs read as follows, "John Smith"; this because he is afraid or ashamed to add "American Dentist" for fear the people may confuse him with the German dentist.

These are the conditions here in Germany, and here I think is the origin of "American" Dentist or American Dentistry, because I could hardly think that the gentleman that wrote the article alluded to such a condition existing in the States. There they are all Americans, and I cannot believe that anyone will call himself there, American Dentist; this would really show lack of good taste.

CLEANING GLASS.—If the fountain cuspidor or other office glassware becomes coated with a white deposit from hard water, a few drops of nitric acid will dissolve the coating and leave the glass sparkling and bright. The acid may be easily applied with a bit of absorbent cotton held in tweezers.—*Texas Dental Journal*.

THE NATIONAL DENTAL ASSOCIATION MEETING,
WASHINGTON, D. C., SEPTEMBER, 1912

REPORTED BY ALONZO MILTON NODINE, D.D.S., NEW YORK

(Concluded from the November number)

DR. M. L. RHEIN, New York City, read a paper on "Mouth Infections: Their Etiology and a Consideration of What Effects They May Have upon the Vital Organs and Other Tissues."

This is a very comprehensive view of the subject and explains some of the latest conceptions of the underlying causes of systemic, functional, and organic diseases. He also told of the effects of poor root canal work in causing such conditions.

He explained the defenses that are organized in the body for its protection, in the tissues themselves, the blood, the lymph, and other defensive organs. He referred to the fact that physicians have neglected to investigate and consider the mouth in their diagnoses and treatments of systemic and organic disturbances.

Dr. C. M. McCauley, of Abilene, Texas, in his paper, "The Great Need of Improvement in Quality of Commercial Alloys," told of his experiments to discover the alloys that come up to the standard, and recommended the appointment of a committee to assist him in carrying out further experiments. He laid particular stress on the difficulty dentists find in securing a good alloy. He explained that very few alloys were sold under the manufacturer's name, hence the difficulty of tracing the responsibility for the quality and reliability of alloys sold.

Dr. L. F. Kebler, of the Bureau of Chemistry, in his paper on "Oral Dental Preparations," spoke of the department with which he is connected. He explained the efforts his department is making in the investigating of the merits of various dental preparations and the claims for them. He dwelt upon the provisions of the new pure food and drug acts in relation to tooth powders and mouth washes. He said the experiments of this department show that none of these preparations possess in the mouth any of the antiseptic properties claimed for them. He explained the difficulty of enforcing the law in regard to these preparations, because they are supported by testimonials as to their efficiency by prominent men in the dental profession.

Dr. Lawrence G. Singleton, in his paper on "The Significance of Normal Occlusion and its Relation to Facial Contour," stated that he believed malocclusion was due not so much to inherited characteristics as to the environment of the teeth during and after eruption. This

contention was supported by Dr. E. A. Bogue, who declared that little significance was attached to a child's contracting cold, but which frequently resulted in the development of adenoids. And adenoids interfering with nasal breathing induced mouth breathing, which is the underlying cause of so much dental distortion.

Surgeon-General Rupert Blue (personal representative of President Taft), United States Public Health and Marine Hospital Service, in his address of welcome said: "The keynote of our civilization is the uplift of the human race. The efforts made by the United States Government to stamp out the sources from which emanate contagion and the carriers of such, is a great economic movement and increases human efficiency. This mouth hygiene campaign is a great conservation propaganda." Dr. Blue compared the wages of the cathedral builders in old England with the pay of stone masons and bricklayers of to-day, and said, "In those days men were cheap and no efforts were made to protect them from disease or accident. But now," he continued, "since the value of man has increased so tremendously, the nation is ever ready in its work to exclude disease and protect him from accident and sickness. There is a growing feeling that the human body is the temple of God. The sordid valuation placed on human life is lost in the higher respect and higher human value given the human body." Dr. Blue declared, "Nowadays everybody recognizes the relation between the dental and mental condition of mankind. Mastication and dental development have an important effect on bodily development. Sound, good, healthy teeth are a guarantee of a sound, good healthy nation."

Assistant Surgeon-General Dr. J. Walter Kerr, of the United States Public Health and Marine Hospital Service, in his paper, "Some Activities of the Public Health Service in Relation to the Control of Preventable Diseases," divided the activities of the health service into six departments:

First.—"Part of this service looks after the prevention of the introduction of disease from foreign countries and foreign ports. This is concerned with the inspection and disinfection of ocean carriers, and gathering of information as to the state of health of ports and countries from which cargoes and passengers have come."

Second.—"The prevention of the spread of infectious diseases that have been imported and that may be transmitted from state to state." He told of the efforts made to control the plague in San Francisco, and the recent suppression of the plague that was imported from Porto Rico.

Third.—"The collection of information both at home and abroad,

in regard to the effects of diseases, their routes of transmission, and methods employed to eradicate them."

Fourth.—"The conduct of scientific experiments to discover the best means of stamping out diseases and curing them." He told of the sacrifices that men in the service had made for science. Also mentioned the investigations connected with the discovery of Yellow Fever, Bubonic Plague, Typhoid Fever, Typhus Fever, or Mexican Fever, Rocky Mountain Spotted Fever and Measles.

Fifth.—"The investigation and administration of health measures in various government departments. The control and treatment of diseases in the army and navy."

Sixth.—"The solving of problems dealing with the diseases and health habits of the Indian tribes."

Each of these were dealt with comprehensively and fully.

Dr. S. A. Evans, former Commissioner of Health in Chicago, address was on "Education for Health." * "Education is cultivating the sense of appeal. And Oral Hygiene is an appeal to the doctor and the dentist to improve the public health of the Community." He continued, "Oral Hygiene is showing the dentist that he owes a duty to the community, not only in regard to teeth but to all that pertains to the oral cavity." Dr. Evans stated, "Only four per cent. of the people die of old age, four per cent. die of accidents, and ninety-two per cent. die of preventable diseases." He continued, "Most of the diseases are contagious and the others are diseases of indiscretion and of ignorance." He said, "The belief that diseases are chiefly borne is passing away." He cited the fact that "Measles has been recently found to be communicated not by the scales of particles of skin, but by the exudations from the back of the mouth and nose." If we could do away with the mouth as a port of entry for disease, if we could do away with diseased and decayed teeth we could go far toward eliminating that ninety-two per cent. of the preventable diseases.

"In the great changes that are taking place in our national and social relations the physicians and the dentists must not stand still, but both must coöperate and participate in guiding and governing these changes."

He went on to explain the opposition of the twenty thousand physicians in England, members of the British Medical Association, to the Insurance act. He said, "The act has not made provision for the care of teeth of those insured."

* Union Oral Hygiene Meeting under the auspices of the National Dental Association, The National Hygiene Association, The District of Columbia Dental Society, at The New Willard Hotel, Washington, D. C., September 13-14, 1912.

The Insurance act has not made proper provision for the treatment of the sick and has not provided for the care of the teeth to which so many diseases trace their source. The framers of the act have not placed a high enough value on the services of the physician into whose hands is placed the health of the people.

Further in his address he said, "The practice of medicine and the practice of dentistry must play their parts in the great economic revolution that is taking place. There is nothing so different, so radical in the two professions that will prevent both from passing into the great field of public health."

"The dental profession should not only be concerned with its professional and scientific interests, but should also take part in the affairs of the government and all activities that pertain to the health of the people and everything that concerns the welfare of the people."

Dr. Floretan Aguilar, of Madrid, Spain, dentist of the King Alfonso, made a short address in English telling that he was on his way to Chicago as the representative of the International Dental Association to present Prof. G. V. Black with the Miller Memorial Medal, voted him by the international body September 12th.

Dr. Frank L. Platt, of San Francisco, addressed the meeting relative to the Panama-Pacific International Exposition. He stated that the dentists of San Francisco had raised so far eight thousand dollars, and it would be increased twenty thousand dollars more. The dentists of the Pacific Coast states will also contribute to entertain and provide for a Dental Congress at the Exposition.

The dentists have incorporated in order to better facilitate the business of arranging for the conduct of such an undertaking.

The convention is noteworthy for several reasons and marks an epoch in dental history. One of the first is the admission standard of dental schools which has been raised. The Dental Educational Council of America is composed of fifteen members, five each from the National Association of Dental Examiners, The National Association of Dental Faculties, and the National Dental Association.

The meeting of this council was undoubtedly stimulated by the address made by Dr. Sharp, of the University of California, in Denver, 1910, and by the recommendation made by Dr. Burton Lee Thorpe in his address as president in 1910—that the Association ask the Carnegie Foundation for Advancement of Teaching, to investigate the Dental Colleges of the United States as it had investigated the Medical Colleges.

As a result of the efforts of Dr. Henry L. Banzhaf, secretary and treasurer of the council, and backed by the organization, forty-five of

the fifty-five dental schools in the United States, beginning with this year, require students seeking admission to possess the fifteen Carnegie units, the standard of dental college entrance requirements formulated by the Carnegie Foundation.

The report recommended the establishment of uniform and adequate standards of admission to the dental colleges, the adoption of a uniform curriculum of study with rules governing the advancement of students in classes and a study of the existing dental laws in the United States with a view to offer any suggestions that would provide better and wiser protection for the people.

A more certain appreciation of the influence of systemic conditions as contributing to the cause of pyorrhea alveolaris and equal insistence upon careful local operative treatment of the disease, and the frequent and painstaking after-treatment by patients and dentists.

A better understanding and more certain co-operation between dentists and physicians in public health work and in private practice.

About fifty per cent. of the discussers on the printed programme failed to appear, and many of those who did appear had not seen the papers they were called upon to discuss. This intrudes on the indulgence of those who come to get useful information and not the vaporizations of undigested opinions and theories. To do away with these frothy discussions, the papers ought to be in the hands of those who are to discuss them at least thirty days before the meeting.

There were over 325 clinics of which New York City contributed 29. New York State, outside of New York City, furnished 22, making 51 for the whole state or nearly $\frac{1}{6}$ of the entire number of clinics. Chicago came next with 17 clinics and the state outside of Chicago 11, making a total of 28 for the State of Illinois. Philadelphia sent 12 and the rest of Pennsylvania 15, making a total of 27 for the state. Boston gave 11 and the rest of the state 18, making 29 for Massachusetts. Ohio 22, Iowa 16, Missouri and Kansas 13 each; New Jersey, North Carolina 9; Washington, D. C., Georgia, Virginia 8; Michigan, South Carolina 7; Maryland, Nebraska, Indiana, California 6; Colorado 4; Minnesota, Tennessee, Florida, Texas, Kentucky, Wisconsin 3; Louisiana, West Virginia, Rhode Island, North Dakota, Vermont, 2; Connecticut, Alabama, Maine, Mississippi, New Hampshire 1; Canada 1; Arkansas, New Mexico, Arkansas, Delaware, South Dakota, Montana, Wyoming, Idaho, Washington, Oregon, Arizona, not any.

There were thirty-four Pyorrhea clinics.

Thirty-four bridgework clinics.

Twenty-seven crown clinics.

Twenty-two orthodontic clinics.

Twenty gold filling.
Nineteen gold inlay.
Sixteen prosthetic.
Fifteen general anesthetics including somnoform.
Fifteen root canal work.
Thirteen porcelain clinics.
Nine devoted to local anesthetics.
Nine radiography and electro therapeutics.

The clinics show that there is a wide adoption and advocacy of removable bridgework, local anesthesia, and general anesthesia (nitrous oxide and oxygen) pyorrhea work, orthodontia, root canal work and radiography.

No paper was read by any foreign dentist, which is to be regretted on account of the proximity of the International Congress of Hygiene, and it might have been an added inducement for some famous English, French, German, Austrian, Swedish, or Danish dentists to visit us. All the committees for the ensuing year were appointed before the convention left for home Saturday.

The National Dental Association voted to hold its 1915 meeting in San Francisco.

Kansas City was chosen as the meeting place for 1913. The following officers were elected: Frank O. Hetrick, of Ottawa, Kan., president; John H. London, of Washington, D. C., vice-president for the South; Thomas B. Hartzell, of Minneapolis, vice-president for the West; V. H. Jackson, vice-president for the East; the corresponding secretary, recording secretary, and treasurer were reelected: Charles W. Rodgers, of Boston, Homer C. Brown, Columbus, Ohio, and H. B. McFadden, of Philadelphia, respectively.

THE PROBLEM OF THE LOWER JAW

By L. P. HASKELL, D.D.S., CHICAGO, ILL.

It is a constant wonder to myself, after twelve years' use of a denture on a lower jaw like mine—and there are multitudes of these flat, narrow jaws—how they can be used as successfully as my own is.

Nothing to hold it in place, no adhesion, and as absorption has been so complete, the muscles are attached at the margin of the jaw, so that the plate cannot be extended over the lingual side at all, as it would be lifted by the tongue. To demonstrate this, I place the end of the little finger just a little over the margin, holding it down tight,

and on lifting the tongue it is thrown out. Not only this obstruction but a mass of glands are lifted one-quarter of an inch above the jaw. And still there is another bad obstruction; on the left side (and this is one of the eight abnormal conditions found in the left side of the mouth, rarely ever seen on the right side) there is attached a tough, flexible membrane, perhaps one-half of an inch long, reaching to the end of the margin. Of course this prevents the plate extending over the margin, and in some cases requires a thinning or hollowing of the rubber.

Another serious difficulty is found in many cases—a flexible membrane over much of the surface. The membrane of the lower jaw is more easily irritated than the upper, so much so that upon placing a denture in the mouth I say to the patient, "This plate is far more liable to irritate the gums than the upper set, and if it does irritate, you can't eat until it is relieved, but come back with the plate in the mouth, so the irritated spot will show." The dentist can always see the spot, but it is not always easy to locate it on the plate. To do this, place a little moist whiting on the spot, insert the plate, and on removing the exact place for relief is seen.

In former years I sometimes placed flanges along the side of the bicuspid and molars, to fill out the cheeks, not supposing it was of any further use. In later years, from experience with my own set, I have found these useful in a large measure, as the cheeks lay over them and help to hold the plate in place, but it is important to know just how to place them. If they are placed at the margin of the plate the muscles lift the plate. Place them midway between the margin and necks of the teeth, hollowed a little.

The occlusion of the teeth is a very important factor. The anterior teeth must *never* come in contact, but the pressure should be on the bicuspid and first molar, never on the second. With this condition of the jaw, grinding is an impossibility, it is *direct pressure* only. The teeth should be well grooved.

When this excessive absorption has occurred, as it always does, from wearing partial lower sets and the patient later wearing a full set, the anterior portion of the jaw will gradually settle. This, of course, shortens the closure in front, but leaves the molars too long; undue pressure then irritates, to relieve which, the grinding of the molars and not filing the plate, is needed.

One who has not had personal experience would suppose that in the use of such a denture crumbs and seeds would constantly get under the plate, but I have found this rarely the case. When it does occur, instead of removing the plate I take a swallow of water, close

the lips, and gurgle the water under the plate, having lifted it with the tongue.

I would say here that the rubber plate on the lower jaw is as good as anything for various reasons.

The heavy plate, cast or otherwise, is out of the question, as it will slide about in talking and eating. I speak again from personal experience.

Often the front of the jaw is an inclined plane, so that the pressure on the front teeth, as the plate cannot extend lingually, will cause the plate to slide, for which there is no remedy.

132 No. WABASH AVENUE.

LAWSON'S ARTICLES IN "EVERYBODY'S"

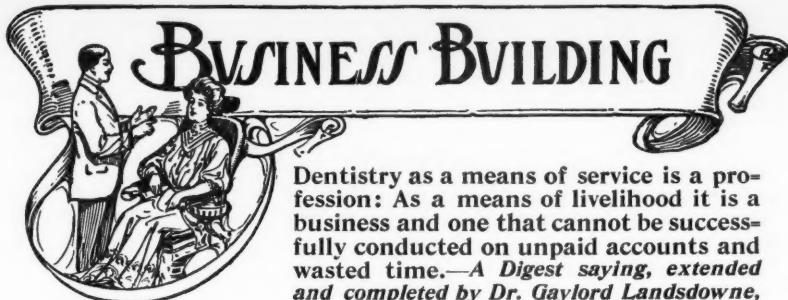
MR. T. W. LAWSON is contributing to *Everybody's Magazine* a series of articles which have to do with the high cost of living. As intelligent contributions on this subject, they are worthy of your attention and mine. He places the blame for high living costs in times of prosperity on the fact that stock manipulators have inflated the values of our producing and transporting corporations by about forty millions of dollars, have sold us "water" in the form of stocks to that amount, and are collecting two thousand million dollars annually in dividends on these stocks. These two thousand millions are necessarily added to the normal production costs, and make, or help make, our high prices.

I know nothing of Mr. Lawson. He may be all that his friends or his enemies claim. Both seem to agree that he knows his business. And when a man who knows his business speaks on a subject that interests us as much as this does, it is well worth our while to listen. He is dealing with a subject which must at some time have our attention, and the more intelligent we are concerning it the better we can attend to it when the time comes.

Try to have patience with the literary style which, in places, is very bad and hard to read. Mr. Lawson made a literary reputation by the clear, running, vivid style of his former articles. He seems now to be trying to live up to it by coining strange and not very pleasing adjectives. Overlook them and get the thought.

This is not an advertisement. Neither Mr. Lawson nor *Everybody's* could get this in here. It is my effort to get "Digesters" interested in a subject that must some day interest us all.

G. W. C.



Dentistry as a means of service is a profession: As a means of livelihood it is a business and one that cannot be successfully conducted on unpaid accounts and wasted time.—*A Digest saying, extended and completed by Dr. Gaylord Lansdowne, Louisiana, Mo.*

WHERE DO OUR PATIENTS COME IN?

BY H. F. DICKASON, D.D.S., LAMPASAS, TEXAS

The thoughts which this author expresses have crossed all our minds many times. It is just as well to give them expression. It may help bring the answer. What reply will you make to them?—EDITOR.

IT is with pleasure that I read each month the DIGEST, especially Brother Bill's Letters, and other discussions on the financial side of dentistry. There are, however, a few things of a similar nature in all these discussions which I have never been able to thoroughly understand, as well as some things we read on dental subjects which have no relation to the financial side of practice. One of the principal thoughts suggested is, Where do our patients come in? Is it that we are the complete dictators and can do, say, and charge as we please, while our patients passively submit? For instance, one operator will describe an operation in which he has whittled upon the human anatomy as if he were a sculptor working on a piece of marble, but he neglects to describe the aerobatic contortions of said anatomy during the operation. In the August DIGEST there is a caption as follows: "What would you do with this Child?" When I read that article, I could not help likening this dentist's experience with so many of my own, and wonder how these sculptors would handle a case of this kind. It is a fact that few mention, that the patient is a factor to be reckoned with when we are cleaning enamel, making flat bases and steps for fillings, and this reckoning is sometimes so unsatisfactory that we are reminded of the caption, "What would you do with this Child?" I am quite sure that many of us, who are not familiar with "Brownstone Dentistry"—which seems to mean, do as you please, just when you please, and charge what you please—would like to know what kind of hypnotic suggestion is used to enable one to do this. Where do our nervous patients come in; or, is it a fact, that the majority of those who write for the journals practise in that class of society who "have no nerves"? It would be a novel departure and in-

teresting reading to a large body of everyday dentists who practise upon everyday normal people, "who can stand anything except having their teeth worked on," to hear something of what the patient did, and what became of the flat base, bevel walls, steps, etc.

Now in regard to fees: It is easy to figure just how much an hour it costs us to run our office, how much we wish for household expenses, and how much we shall lay up for old age, and what one's charges per hour should be to make provision for these items, but where do our patients come in? It is just as reasonable for them to tell us that they have every item of expense figured out and that only so much is allowed for dental services.

In reading Brother Bill's August letter, there is much which can be indorsed, and as a whole it is profitable and interesting reading, but some things smack of downright charlatanism; for instance, in his discussion about raising fees, among other things regarding this case he says: "Mrs. Jones, I want to give this case a little different treatment, if you will let me. It will cost a little more, but it will be much better and even cheaper in the end." All this for the sole purpose of getting a larger fee. It reminds me of the "dental parlor," where amalgam fillings are twenty-five cents, silver fifty cents, and platinum one dollar, all from the same bottle. Suppose Mrs. Jones should say, "Why, doctor, I have always had implicit confidence in your integrity and ability, but if you have not heretofore given me your best services I have no reason to expect you will do so at an increased fee."

We all wish to live in fine houses, ride in automobiles, work a very limited number of hours a day and weeks a year, but the question is, will raising prices accomplish this. It has been said that when the Standard Oil Co. is fined, all they have to do is to raise the price of oil and make the people pay the price. According to the reasoning of Brother Bill, should one's living expenses increase, or should we need an extra amount for any purpose, all we have to do is to raise the price and make our patients pay it. This is possible if we have a monopoly, but quite a different proposition when it is only a few paces across the street to the dentist who is more moderate in his expenditures or who has the "Dental Parlor bottle" to show his patients that which comes out of it is according to their ability to pay. Prices, as a rule, will automatically arrange themselves without any explanation on our part as to why we charge more than formerly. All wish the best services they can get, and generally patronize those who can give them the best for the amount they are able to pay. If our clientèle is among the rich, where price is no consideration, it is unnecessary for us to force it to be a consideration by making any excuse for

charging a good fee, and if we work for the poor we cannot expect prices they are unable to pay. Good, honest work will slowly find its reward in a better clientèle.

It is one's first duty to give our best services at all times, regardless of fees. If we do this and wish to work eight hours a day at, say, three dollars an hour, and there is a demand for the full eight hours, our prices may be easily increased; a few will drop out, but the character of our general clientèle will be raised, and, as we had, at three dollars an hour, reached our limit, it gives us room to expand. But if at three dollars an hour there is a demand for our services of only four hours a day, we must look for other methods of increasing our income besides raising fees. No doubt all have noticed the inclination to say five dollars, instead of four, when our office is full—this is the principle of raising fees.

THE SCIENCE OF BUILDING ANY BUSINESS

By A. F. SHELDON, CHICAGO, ILL.

(Concluded from the November number)

THE lateness of the hour prohibits me from even attempting to teach any of the scientific principles in the reading of human nature. Let us now come for a moment to that which must necessarily be a very brief consideration of the third basic injunction in business building—the one relating to the third factor in the deal—the injunction which reads "*know your business*."

Again I challenge attention to the fact that the road to exact knowledge is analysis.

If the salesman, the merchant, and the professional man, or anyone else is to *know* his business, he must *analyze* that business, and again I say that analysis is the process of separation into parts.

From the viewpoint of the business-building salesman, the one who is engaged in the specific work of selling goods, be these good products or services, one of his first duties, as far as his goods or services are concerned, is to find out all of the points which can truthfully be made concerning their merits. The road to the gaining of these points is analysis.

The true salesman is a teacher. It is, or should be, his province to *teach* the prospective patron concerning the *merits* of his goods or services.

What we want in salesmanship is men not of just words, words, words, but points, points, points, and each should be a pointed arrow that goes straight to the minds and the souls of men.

The day of the human windmill, the verbal cyclone and the living talking machine are out of date in selling goods or services.

A great many salesmen talk too much, they tire the customer out. They talk him into buying a thing, then they actually talk him out of it again. Some talk so much that they tell all the truth concerning their goods and then some. Marshall Field was the greatest merchant of his time in the United States, and one of his guiding stars was this truth, "The man who lies to sell goods is a fool."

A great many salesmen in retail stores do not know their goods, they know almost nothing of the history or the how of manufacture of many things which they have for sale. The time is coming, indeed it is rapidly approaching, when the salesman—retail, wholesale, specialty or promoter, as well as the professional man—will be obliged to study each thing that he sells and to prepare his case concerning those goods or services for the presentation of the merits of them to the mind of the prospective purchaser, just as earnestly as the lawyer studies each case that he may be able to intelligently present the merits of that case to the judge or to the jury.

He will be expected to know as much about his goods as the physician knows about the medicines which he gives to his patients.

Not that he will either need to or find it advisable to give each prospective patron all of the points which he has in his possession concerning any given article.

It would be a foolish physician who would give all of the medicine in his chest, or all of the different kinds of medicine to each patient. It is a wise physician, however, who has at his command, either in his chest or in the drug store near by, all of the different kinds of medicine which he may need.

We will now come to a brief consideration of the fourth injunction to the business builder, the one which applies to the fourth factor in the deal, namely, *apply the knowledge* of self, the other fellow and your business to the end of focusing mental agreement.

Our consideration of this fourth injunction must necessarily be very brief, as the hour is late. I must content myself with the calling of your earnest attention to the fact that there are laws of mind as exact in the realm of mind as are the laws of gravitation in the realm of matter.

If we are to be truly successful in the getting and keeping of more patrons, it behooves us to understand those laws, for in final analysis, all trade is a mental thing. The deal is made in the mind, it is not made in the pocketbook or the check book.

That which takes place in the pocketbook or the check book is merely

evidence of the fact that the minds have met in common agreement.

All commerce really boils itself down to the question of the seller inducing in the mind of the buyer six mental states or conditions.

The first of these is favorable attention.

The second is the feeling of interest.

The third is the feeling of desire.

The fourth is action which in commerce is the act of buying. And the following are exact laws:

First.—Favorable attention properly sustained will change to the feeling of interest.

Second.—The feeling of interest properly intensified will change to the feeling of desire.

Third.—The feeling of desire properly intensified will change to action.

Permeating these four mental states must be another mental condition, namely, the feeling of confidence.

After the property has changed hands, after the deal is made, the feeling of satisfaction must take place and remain permanent in the mind of the patron.

The business builder must always keep it in mind the cement of satisfaction, making permanent the concrete of confidence, which is the basis of all trade, or real service, if he would build a superstructure of permanent and profitable patronage.

The success of an institution is but the sum of the successes of the individuals engaged in its service.

If everybody from porter to president is making good in a big way, the making good of the composite salesman, the institution itself will take care of itself. And the success, the "making good" power of the institution commercially, is in due proportion to its power to induce in the mind of the buying public the six mental conditions which I have enumerated, namely, favorable attention, interest, desire, action, confidence, and satisfaction. This power is in turn intensified, developed, made to increase in proportion as each individual engaged in the service of any given institution comes into an understanding first of self, and the laws entering into the knowing of himself, to the end of building himself through the growth of the positive, constructive or success qualities. Second, as he comes into an understanding of the how of reading human nature. Third, as he comes into an understanding of the how of knowing his business or profession. And fourth, as he applies that knowledge.

But please mark the emphasis on the word **APPLY**. Knowledge

alone is but *static* power, it is but *stored* power, it only becomes *dynamic* when it is *applied*. The test of men is in what they *do*, not in what they *know*. The efficient man *does* things. And there are four grades of efficiency.

Down at the bottom of the ladder of efficiency come the indifferent class, and you find them in every calling. In that great indifferent class you will find the inefficient, the I-don't-care fellows, the fellows who are just in it for the ride. They are generally ruining their eyesight looking for more pay. Forgetting that if they would look for the opportunity to do more work—to render a greater service—the more pay would take care of itself. They are generally wishing for success, but they generally take it all out in wishing. They have a wishbone where the backbone ought to be.

They live down in the I-can't colony, and have a perpetual membership in the what's-the-use brigade.

Just above this class stands the student class. Those whose minds have awakened and who are looking out broadly upon things. Consciously or unconsciously, clearly or dimly, intellectually or intuitively, they have perceived the fact that life is governed by law, not luck, and they are earnestly seeking for an understanding of those laws. To that end they are students of men and of institutions and of journals and of books, of environment and of things.

Just above the student class stands that smaller class, the adepts, the artists, those who are truly adepts—artistic—in the doing of their work, whether that work is the hewing of wood and the drawing of water, or the administration of the affairs of state.

The adept, the artist, is a doer of deeds—he does things; he applies his knowledge; he applies it artistically to the doing of things, or rather to the doing of things artistically.

The student may stop with the knowing, the artist never stops short of the doing.

But the artist has consciously or unconsciously entered the temple of high art through the door of knowledge more or less organized. Science is the open door leading into the temple of high art.

Finally at the top stands that small class, the smallest class of all from the viewpoint of efficiency, the masters.

With the master, the doing of it right, right now, has become automatic, a habit. He initiates; he creates; he leads where artists and students follow, with the indifferent class lingering in the rear.

And the reason there is so much room at the top is because there are so few masters.

No master ever became a master until he was first an adept, and

no adept ever became an adept until he was first a student, and no student ever became a student until he roused himself from the sleep of indifference, climbed out of the bed of I-don't-careitiveness, canceled his membership in the what's-the-use brigade, and moved out of the I-can't colony.

In conclusion, I would call your attention to the seed from which the man tree grown to mastership springs. It is the seed of *desire to be of service to the world*. The function of trade or profession is not that of barter. The first, the prime function of every legitimate business or profession is that of service.

Our master merchants, as well as the masters in professional lines, are the master servants of their patrons. Our master physicians or dentists are the master servants of their patients. Our master lawyers are the master servants of their clients. Truly, the greatest among you shall be your servants.

John Wanamaker, who is possibly the greatest local merchant of his time in the United States to-day, once said to me: "If I can render a greater service to the people than any other merchant, then the people will make a beaten path to my door."

The profit you make is simply the pay you get for the service you render.

Serve each of many people, getting a little pay; in other words, a legitimate profit from each, and the total profits mount high.

The greater the service, the greater the profit. And this is legitimate. The servant is worthy of his hire. If you serve well, you are entitled to profit much. If you do not serve well, you are not entitled to much profit. If you do not serve at all, you are not entitled to any profit. Let me hold my hand at arm's length and I can see it real well. Bring it very close to my eyes—right up against my eyes—and I cannot see it at all. Not only that, it shuts out the view of the world.

The moral is, you can get so close to a thing you cannot see it, and millions of business men, employers and employees alike, as well as professional men, get so close to the almighty dollar in their chase for it, that they not only cannot get it, but it comes to shut out the view of the world. Let those same men, with a broader mental vision, turn their attention to the how of rendering a greater service to their patrons, and the getting of the dollar will take care of itself.

If you want heat you do not go out searching for heat; you build a fire, then the heat comes as a natural consequence.

If you want the heat of money, the enjoyable warmth of profit, you must first build the fire of service, and then the warmth of profits comes as a natural consequence.

Service is cause. Profit is effect. And if you would truly succeed you must obey the laws of cause and effect in the business world.

In bidding you "good night," I would leave three circles on your screen of consciousness. It is my earnest hope that you will help me write them there in a way that they will never be effaced.

The first circle, the large circle, the outer circle, let us label business building, the power to make permanent and profitable patrons.

With that circle on the screen of consciousness, draw another circle, a little smaller circle, just inside the large circle, and label this second circle "salesmanship." And this is salesmanship. And we will define this as the power to persuade patrons, directly and indirectly, through knowledge or professional ability, words and deeds, to purchase your product at a profit.

And now inside this second circle draw a central circle, and label this circle, number three, "service." And define that as the power to serve to the end of satisfaction and profit of both the buyer and the seller. And thus do we see that while the body of business is business building, the life blood of it is salesmanship, but the heart that pumps that life blood is service—the power to serve to the end of satisfaction and profit of both the buyer and the seller, the lawyer and client, the doctor and patient. When the last count is in we shall find that the science of building any business or profession is the science of serving the world, in the functions of that particular sphere of activity, and we will find that *he profits most who serves the best.*—*The Dental Brief.*

AMERICAN DENTISTRY IN A NORWEGIAN SCHOOL

(Note from United States Bureau of Education)

CHILDREN in the public schools of Stavanger, Norway, are treated with the aid of American dental apparatus by a dentist who received his postgraduate dental education in the United States.

This year two rooms were fitted up as dental clinics. Twice during the school year the children are to have their teeth examined. If any defects are found, the dentist will hand to the child a card to take home to the parents asking their consent to treatment, the work to be done for the child free of charge. The 800 children in the first grade whose teeth are under observation this year will continue to be treated when they pass into succeeding grades, so that eventually the plan will spread automatically to the entire school system. The dental rooms are open every day—9 to 11 a.m. for boys and 3 to 5 p.m. for the girls.—*Consular Reports.*

SOME PERTINENT QUERIES

EVERY question in the following letter is pertinent. Unfortunately I haven't any data from which to answer them. Will you men who are making \$8,000 gross or more annually, write me the answers to these questions as developed in your own practice? I will regard them as confidential, and no use will be made of them by which anyone can trace the source of my information.

You may help many a man who needs only this information to start him on the right path.

G. W. C.

DEAR DR. CLAPP:

I notice your lecture in the DENTAL DIGEST on "Getting Right Down to Brass Tacks on the Subject of Dental Business," and particularly the statistics regarding the average dental practice of \$2,600 gross per year.

Now, doctor, to elevate the business end of dentistry, in which I am sure those \$2,600 men would be glad to join me, I ask you to give us these statistics on those fellows who make \$8,000 gross per year and better, \$20,000.

Tell us, were the average poor men started or did father foot the bills?

Did they start right off from college with top-notch prices or gradually raise them?

Are they mostly in large cities or suburbs, and if in cities, are they mostly in dentists' office buildings, flats, or private houses; and are they in business or residential neighborhoods?

Do most of them do the operating alone; and if not, what part of their work does the assistant do?

How long do they give credit to their patients, and do they put their accounts in the hands of collection companies for collection?

Are they general practitioners or specialists?

To what particular point do you attribute their great success over the average practitioner?

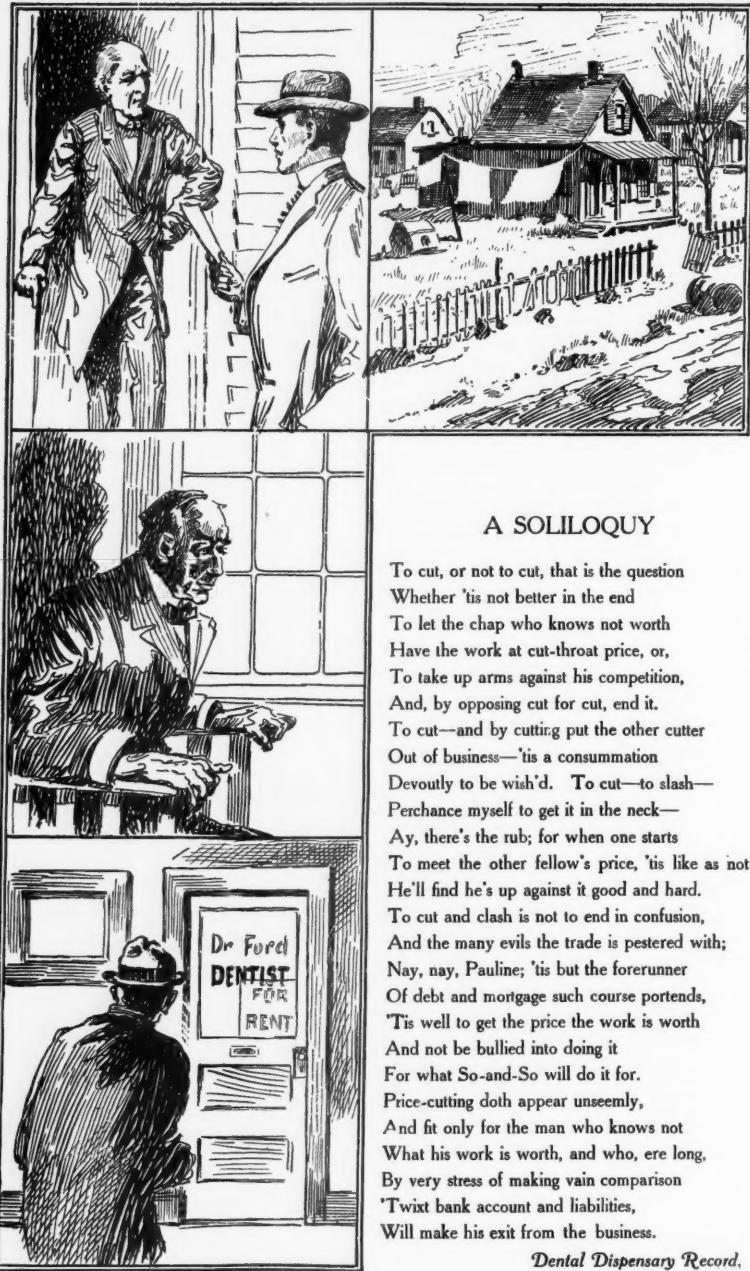
What is the average time they spend at their work per week?

What is the average age of this class of practitioner?

Hoping that if you do not consider the answers to these questions interesting enough to investigate and publish in the DENTAL DIGEST, that you will send me personally some information along these lines which would be gratefully received. I remain,

Yours very truly,

W. M. THOMAS.



A SOLILOQUY

To cut, or not to cut, that is the question
 Whether 'tis not better in the end
 To let the chap who knows not worth
 Have the work at cut-throat price, or,
 To take up arms against his competition,
 And, by opposing cut for cut, end it.
 To cut—and by cutting put the other cutter
 Out of business—'tis a consummation
 Devoutly to be wish'd. To cut—to slash—
 Perchance myself to get it in the neck—
 Ay, there's the rub; for when one starts
 To meet the other fellow's price, 'tis like as not
 He'll find he's up against it good and hard.
 To cut and clash is not to end in confusion,
 And the many evils the trade is pestered with;
 Nay, nay, Pauline; 'tis but the forerunner
 Of debt and mortgage such course portends,
 'Tis well to get the price the work is worth
 And not be bullied into doing it
 For what So-and-So will do it for.
 Price-cutting doth appear unseemly,
 And fit only for the man who knows not
 What his work is worth, and who, ere long,
 By very stress of making vain comparison
 'Twixt bank account and liabilities,
 Will make his exit from the business.

Dental Dispensary Record.

EXPERIENCES

ANSWERS TO "E. P. M."

Editor DENTAL DIGEST:

"E. P. M.'s" experience in October's issue should attract more attention, to my mind, and bring more letters from the readers than any experience that has been published for some time.

Just think, gentlemen, \$5,000 in TEN YEARS; \$500 a year, or \$42 per month, can you believe it? I could hardly do so and reread the figures to be sure I had read aright. Can you blame "E. P. M." for wanting to quit dentistry, anyway? *Pluck* does not seem to be one of "E. P. M.'s" absent qualifications.

I think if some one will call Brother Bill's attention to "E. P. M.'s" letter we will have something from that gentleman that will make our hair curl and incidentally put more good "sand in our craw," which will help us materially in receiving better fees for our professional services.

I would suggest to "E. P. M." that he remain in no location longer than from six to twelve months if he is not, by that time, taking in as much as \$100 or more, because there certainly are communities where a competent dentist can make \$100 and over per month.

I have been out of school six and one half years, have done cash \$11,700 in that time, an average of \$150 per month; \$100 will easily cover total losses in accounts for the entire time. Have worked on a percentage basis for other dentists, traveled in small towns where no dentist was located, and am now located in a town of about fifteen thousand inhabitants.

My lowest cash month since I began practising dentistry is \$47.50 and my best month \$367. We get slightly better prices than "E. P. M.'s" published schedule. We have seven dentists here and all close their offices, by mutual agreement, one afternoon of each week for recreation, and all look forward to it with the pleasure of the schoolboy looking forward to his Saturdays and Sundays.

My first month here I did \$110; the second month, cash \$148; and now average \$200 cash per month; have been in present location three years.

We are trying to build up better prices here all the time, and Brother Bill's letter and the DENTAL DIGEST are largely instrumental in the good that has been done here along that line.

"E. P. M." possibly has been unfortunate in selecting his locations, because judging from his description of himself and method of

doing business, he should be able to do a great deal better than he has done, even if he locates in most any old town.

A few don'ts, which are by no means new or original, have been of help to me in my practice:

Don't get familiar with your patients or the public at large; be sociable and friendly, always speak to those you know in a hearty manner, but never get familiar.

Don't forget to ask for a deposit from people that you don't know, for often people will come in and get a treatment, the aching stopped, and then not return.

Don't tell anyone (except your wife, of course) that business is rotten and that you are barely making both ends meet; people will not patronize the down-and-out man. To be prosperous look prosperous.

Don't tell anyone how much money you have in the bank, invested, or otherwise.

Don't forget to always look clean and neat and keep your office and instruments (and finger nails) the same way.

Don't allow your work cabinet to be general headquarters for all the old bottles, odds and ends that have accumulated for the last six or seven years, but go through your cabinet occasionally and remove everything that is of no use to you, or if you so desire, one drawer may be used for odds and ends.

Don't tell anyone how much you take in each month, week, or day; it is poor business policy to let the public know how much business you are doing.

Don't refuse money when offered to you for professional services whether it be for work in advance or otherwise; for instance, when starting a bill of work and part payment is offered after first sitting, *don't say* in that lordly way we have, "Oh, that is all right, you can pay all when work is finished," but GET THE MONEY.

Don't hum and haw and get a sure-enough grouch on when a patient returns with unsatisfactory work, but examine the work as soon as you can; don't put the patient off longer than absolutely necessary, for this creates a bad impression on the patient, but quietly look over the work, and if the fault is yours do the work over as soon as possible.

Don't forget to stick up a small gold-lettered sign, "Terms Cash and Deposit Required on all work," where the patients can read plainly.

Don't forget this, if you are doing the best possible work that you can for a patient, and find that you are going to lose him by his going to quit you, *you quit him first*, and you will find people will respect you more and you will also respect yourself more.

In conclusion, I want to say I am not, nor never have been, in the

\$5,000 or \$10,000 per year class, yet I have been able to save some money, though no great amount, and we (wife and child) have always had plenty to eat and wear and take a trip occasionally. I carry some good life and accident insurance, belong to two lodges, attend church and Sunday School regularly and at no time have I ever regretted that I took up dentistry.

"A SYMPATHIZER."

Editor DENTAL DIGEST:

AFTER reading the letter in the October DIGEST from E. P. M., I could not refrain from writing an answer to it.

Our friend E. P. M. states in his letter that he has had seven different locations in ten years. That in itself is evidence that he has not any too much stick-to-it-iveness.

The old saw about rich people "sticking" you has been used until its teeth are all out of line. It is not the *rich* people who "stick" their dentist, not by any means, but instead our friend should have said the *seeming* rich.

Of course a rich man will sometimes take his time paying, but he *will* pay and will pay a price that makes it worth one's while to wait a time for the money, and a dentist who does work for the rich people of any community and does not ask a large enough fee to pay for waiting a little while for his money, has a mighty poor chance of meeting his butcher's and grocer's bills.

There is a class of people to be found in every community who carry the air of prosperity, and perhaps are driving a sixty-horsepower car, and are always "among those present" on all occasions, who are responsible for giving the truly rich a bad reputation as payers of their bills.

I have the good fortune to work for some wealthy families, and when the bill is sent I am sure of getting a check within a reasonable length of time. These people treat their dentist as they do their physician, they treat him as a gentleman and a professional man.

When a person of the second class, above mentioned, comes to me I always say, "This work will cost you one half when the work is started and the balance when completed." Then if they decide to have the work done I always say when I hand them their appointment card for the last sitting, "I will complete your work next time and the balance will be such and such an amount."

If a dentist is master of himself and does not cringe before his patients and let them know that he is practising dentistry as a means of making money and not for the mere joy of working, he will command

their respect and be hundreds of dollars ahead in the long run. I can imagine E. P. M. when he told the man it would be one dollar for lancing his gums, doing so in an apologetic way and quickly backing down to fifty cents. Of course the man kicked. Who wouldn't kick?

Suppose you went to buy a necktie and the clerk said, "This tie is a dollar. Oh, well I'll make it fifty cents because you are going to buy a shirt here next summer." Wouldn't you feel as if he was over-charging even at fifty cents? You would pay the dollar asked, and feel that you were getting a dollar tie, but if he backed down before you had a chance to pay, you would think you were in a position to be skinned, even at fifty cents.

E. P. M. says the farmers won't pay the "price" for dental work. I would like to find out then, why farmers will come to a large city and have work done and will pay twice the fee the dentist in the near-by town is asking, if it isn't that they want proper dental service and are willing to pay a good fee to get such service. Not that the dentist in the near-by town cannot give as good service, but he has labored under the impression so long that the farmers will not pay good fees that he is afraid to ask them.

He forgets that the farmers are buying more motor cars, victrolas, and player pianos than city people. They have the ready money and want the services, and the best part is, they mostly pay cash.

Our friend is the pessimist who only sees the hole in dentistry, but there is a great big doughnut all around that hole if he will wipe off his glasses and take a look.

H. U. V.

Editor DENTAL DIGEST:

WHEN I first read E. P. M.'s letter in the current number of the DIGEST it made me mad, and now after reading it the second time I feel that I would like to answer it, at least part of it.

To answer his last question first I would say that in my opinion he would not be worth more than about eight dollars a week to a busy dentist, especially if the busy dentist took into consideration E. P. M.'s ten years' experience. I would advise him to stick it out in one office for a reasonable time or else give up dentistry. Also, he would do well to forget that price-list and use some of his spare time in doing his best for some poor patients without making any charge at all. I have always done this and hope I may continue to as long as I practise. It not only pays, by always bringing new patients, but it gives me a whole lot of pleasure to see how nice a filling I can make, knowing I will get nothing for it except its advertising value.

If I were to make out a price-list for all the work I do, and taking

six dollars for a Davis crown as a standard, I would think that a fair price for a vulcanite plate would be about twenty dollars.

I guess this will be about all, because E. P. M. did not invite replies from me. I've not been practising many years, but after working for another dentist two years, I opened an office in the same city and the first year I took in more than \$3,600 cash. Of course E. P. M. will not believe it if he has taken in only a little more than that in ten years.

I might add that this dentist for whom I worked was an ethical practitioner, and during the last six months I was with him he paid me forty dollars a week. However, I have worked in advertising offices and must say that the experience gained there has been of great value to me.

K. G. A.

ANSWERS TO "C. A. M."

Editor DENTAL DIGEST:

I NOTICE—in October number—C. A. M.'s inquiry. From brief description I would attribute trouble to impacted teeth. Have had two or three similar cases respond to extraction of offending wisdom teeth. One peculiar case: A middle-aged widow lady who lived about seventeen miles in the country, came to me for dental treatment. With no apparent cause, she had lost her voice some five years before. I found the two lower wisdom teeth badly decayed, with gum tissue filling some of the cavities. Though she had not complained of these teeth, she consented, upon my recommendation, to having these two lower wisdom teeth extracted. The lady, within a few minutes, started on her drive home, but before reaching the end of her journey she was surprised at the return of her voice. This was some seven years ago, and her voice has been normal ever since.

It has been my observation that wisdom teeth more often affect the ears than the voice, though throat trouble is often traced to decayed or impacted teeth, and especially the lower wisdom.

To C. A. M. I would recommend the extraction of the impacted teeth, or, if that would be too severe an operation, extract the twelve-year molars to release the wisdom teeth, and see if they would not erupt and very nearly replace those extracted.

G. A. T.

Editor DENTAL DIGEST:

In answer to C. A. M.'s communication in the October DIGEST, I take for granted that a radiograph has been taken and the position of the impacted wisdom teeth determined.

I had a case of a similar nature, only the patient complained also of pain and noises of a rushing nature in and about her ear. She

consulted a very prominent aurist, who said that her ear was perfectly normal and that it might be a reflex pain; possibly of dental origin.

Some time later she came to me for dental attention and mentioned this predicament. On examining her mouth, I noticed her lower wisdom tooth on the right side had not erupted, and slight tenderness was manifested upon pressure in that vicinity. Upon probing, I could not find any indication of the tooth being present and suggested that an X-ray picture be taken. This was done, and on examining the negative I found the wisdom tooth tilted in a mesial direction, the lower was slightly pressing upon the middle third of the molar.

This, I concluded, would cause this reflex pain and discomfort in her ear. I advised its immediate removal. A general anesthetic was given, and the offending member removed. Three weeks later all pain ceased and a very pleased and grateful patient was the result.

I advise C. A. M. to get those wisdom teeth out as soon as he can.

They are no earthly use to the patient as far as the masticatory power is concerned, and furthermore, I am sure that is what is ringing that "telephone wire."

I. J. S.

Editor DENTAL DIGEST:

On page 586 of the October number of the DIGEST C. A. M. asks for advice, and I would advise him as follows:

It is quite probable that the ringing in the ears is due to the impacted teeth pressing or crowding on nerve tissue, and owing to the close relationship of the trigeminal and facial nerves the pain is referred to the ear. Owing to the roots of the lower teeth being in such close proximity to the mandibular nerve, ear pain is most frequently caused from the lowers (when it is caused by the teeth at all), in which case it is transmitted by way of the auricular-temporal nerve and the tympanic branch of the facial, the latter supplying the tympanic membrane.

I would extract all of the wisdom teeth, whether they are causing the pain or not.

J. W. E.

Editor DENTAL DIGEST:

TELL C. A. M. in October DIGEST to extract both lower three molars, and I say emphatically that the ear trouble will cease, providing there is no middle ear disease.

The trouble is that the roots of these teeth are so far back that they keep the tissues along the pterygoid processes inflamed and the inflammation partially closes the Eustachian tube, which runs along them to the middle ear. I know. Will be glad if he will write me after the case is done.

W. E. D.

BROTHER BILL'S LETTERS



MY DEAR BILL:

You've written right smart about Business Ability, but I can't find that you have ever given a definition of it. What is it? Must one be born with it? If not, how does one get it? Above all, how can a dentist who has come to maturity without it get enough to benefit him?

Yours in need,

LOUISIANA.

MY DEAR DOCTOR:

I CAN answer your question pretty well now, which I couldn't have done awhile back. I never reached a satisfactory definition of business ability until I read something written by a chap named Sheldon, who seems to have given this subject a good deal of profitable study. I didn't get the definition ready-made from Sheldon, but padded it a little here and there till I got it fixed up to suit me. It reads, "Business ability is the ability to maintain profit-bringing relations with permanent patients."

Perhaps you don't think much of definitions, but a good one is distinctly worth while. A really good definition tells you what a thing is and enables you to get to work on the job the same day. Sheldon's definition is very good because it enables you to get busy just as soon as your perception and common sense can be summoned to the task.

If I had you here, where I could talk to you man to man, I could begin at the beginning of this definition and unravel at least some of the things it contains, in what I think is the logical order. But writing you in this way, I've got to begin at the back end and work forward. Critics as well as friends read these letters. Some of them think I practise questionable methods, to speak modestly. And if I don't write it out good and plain on the very first page that intelligent, honest service underlies all success, they will not wait till I can put it in its proper place, but will lay up in their hearts another brick to be thrown when the subject of dental business is discussed in their hearing. I shouldn't care about that, if they could only shy their bricks at me. My feelings on this subject got so calloused while I was living on codfish and potatoes, because I couldn't afford even round steak, that no bricks they can heave will even make a dent. But they can't get at me. So they heave their bricks in the hearing of some struggling practitioner who is practising the teachings of a past generation and trying to pay the butcher and grocer this generation's prices. And

sometimes he is so scared by the apparent size of the brick and its force that he dares not set his feet in a new way, even though it may lead to prosperity.

So I'm going to call your attention first to the last two words of the definition, "permanent patients." There is so much wrapped up in these two words that if I don't hurry I shall not get through with them before the space runs out. They mean, in words of one syllable, that you must treat each patient so that he will want to come back, not have to come back, but *want* to come back.

Now, making patients want to come back makes some pretty heavy demands on you. Because if you haven't been about right, the good ladies of the land will tear your reputation to tatters at the sewing circle, and the best of your patients will not want to come back. It demands, first of all, good professional knowledge, so well digested and assimilated that you can practise it and explain it to Mrs. Murphy who doesn't know anything about teeth. It means that you are to read, study, think, practise; that you are to acquire all the useful knowledge your head can hold and transmute it into the best skill your fingers can practise.

It means that you shall have a lively conscience and that it shall have the same working hours as your professional knowledge. You will then tell your patients the truth and seek to exercise for them the same kind of skill you would like exercised on your own teeth.

It's a little difficult to write on this subject of conscience without treading on somebody's toes that I didn't know were there. I don't see how your conscience can have the same working hours as your skill if you're only getting half what an operation is worth, and must choose between slighting the operation and starving. After I learned what a filling should really be, I had many a struggle over this question. I never got any satisfactory answer till I formed the habit of making a clean breast of conditions to my patients, and telling them that I couldn't possibly do the kind of an operation they and I wanted unless I charged enough to cover the costs and a profit. Then we got along splendidly. And my conscience began to recover.

One kind member of the profession has just written me that I am making advertising dentists, and teaching dishonesty and a few other things like that. He's simply looking down the wrong end of his telescope. I don't want men to do wrong. I regard every departure from truth-telling and truth-doing as a step backward in the climb toward true success. I've known men who made great sums of money, sometimes by very questionable methods. I've seen them drive up in their six-cylinder automobiles and have a colored chauffeur wait their

every movement. But when I've looked at the men, I've never wanted any money gotten that way. I'd rather have ten clean dollars than ten thousand dirty ones. I'm strong for money-making, but I regard every dollar made by misrepresentation as a disgrace to the man who makes it.

It is not easy to find dentists who are in position to exercise their consciences. Patients who are moving away often ask to be referred to dentists. It is easy to find men who have technical skill. But it is not always easy to find the dentist who dares to do and say what is honest. Because you will find, if you think a bit, that the mere proposition of being perfectly honest with the next patient who passes several dentists to get to your door, and the charging of a fee that is honest to both yourself and her, demands a good deal more courage than those who do not try it, suspect. There is skill and to spare in our profession. But the men whose consciences work right along with their fingers are none too numerous. So when I say that the very first element in business ability is Conscience, I've said something worthy of your best attention.

Now don't take the bit in your teeth and say that I'm charging the members of our profession as being without consciences. I know better than that. I never go to a dental meeting without feeling proud of many of the men who attend. As I think over their difficulties, how they have been sent untrained in business to make a living in a business world, I am glad that so many of them have done well. I wish all might do well. When they have developed enough business ability to take the right view of possibilities, most of them will be glad to have their consciences as constant companions, in season and out.

I think the reason our profession is not looked up to as among the most beneficial is that we do not do good dentistry as a rule. We know or can learn what a good occlusion is, but there are few among us who can restore one, and still fewer who ever render their patients that service. We know how to help protect our patients from serious illnesses; we know how to help certain classes of backward children toward normal development. And with all patients, save those in humble financial conditions, we might so tie ourselves to the physical welfare of the family that no profession should be more highly regarded than ours. But we don't. Most of us dub along, doing one tenth of the good we could, because we haven't the courage to tell our patients what should be done, to make its importance and benefits plain, and to make them see the justice of fees that would permit us to do it properly.

People don't always want the cheapest form of service in matters

of health. Some of them would make sacrifices to have you render just the service they need. You've made sacrifices for your family, as I have for mine. You've had a good many things done that you couldn't pay for all at once, but that you could make payments on, perhaps by going without other things. And if the loved one was sufficiently benefited, you've never begrimed the money. You would do the same thing again. Can't you think of the man or woman in middle life and unable to properly masticate as occupying that position? Can't you think of the parent with the mouth-breathing, physically deficient child, as in that position, and can't you see your duty? Only, by all that you hold dear, see to it that you know what you're doing, and that you make good.

Working backward one more move along our definition, we come to the term "profit-bringing relations." There are certain hours when I'm not interested in profits, but they're not office hours. There are certain occasions when I'm not concerned about profits, as with some patients, but the rule is that the object of the hours of work in the office is the production of profits.

Why should I work if not for profit? I can have a much better time out under the blue sky with rod and line, or camera, or tennis racquet, or golf sticks, than I can in focusing all my intelligence in the adaptation of a cervical inlay margin.

And how shall I support Mrs. Bill and the little Bills without net profits in cash? When the butcher, the baker, and the candlestick maker send in their bills, they must be paid out of my profits, not out of the capital that is to carry the practice. And my pleasure is greatly increased if, after all these bills are paid, there remains some money for present pleasures and future comfort.

You didn't tell me anything about your family. But if you have a boy ten years old, I'll wager that he can answer right off the bat a question that is puzzling many dentists. Ask him how to make a profit on a trade. If he has ever swapped knives or marbles, he'll tell you instantly, "Sell it for more than it costs you." And that is the whole secret of successful practice. Sell honest, intelligent service for more than it costs.

What does it cost you?

If you were in practice last year and exercised even a grain of business intelligence, you have some record of your expenses. Add up all you can find and add fifty per cent. for little ones you did not put down. You can then tell what it costs you to practise for the period covered. Determine what salary you are worth weekly to the practice and add that. Get the yearly total cost and divide it by 2,000, which is the number of hours you ought to work if your health

is good. You will then have the hourly cost of running your own office. Find out, from actual records, how long it takes to perform the standard operations in your practice. You'll nearly have heart disease when you learn what some of them are costing you. Then remember what the boy told you, "Sell it for more than it costs." If you can't do that, do the best you can. If you can't do it, the fault is in you, not in the profession. That's a part of what is comprised in those words, "profit-bringing relations."

There's one word left in our definition which has in it material enough for more than one letter. It is "maintaining." That means getting and keeping. It comprises the personal element, the manner, dress, and address of the dentist.

If some good fairy could offer me the choice between a fine manner with ordinary brains, and great brains with an ordinary manner, I'd take a fine manner, assured that I should get farther in life with it than I could with the ordinary manner and greater brain power. For a really fine manner is the evidence of love in action, the kindly, sympathetic thought that has time to forget itself for a little and really think of you and yours. And it wins and holds people as nothing else I know of can. But to be fine it must be sincere. The imitation is disgusting. A fine manner is a great asset in the acquiring and holding of a practice.

Then comes dress, personal appearance. I think expense and finery have really little influence on the appearance, so I'm going to tell you a story that goes to the other extreme. Recently, while staying over night in a strange hotel, I felt very thirsty, and hesitated to drink the city water. I went into the bar to get a lemonade. It was a tiny bar, hidden back in a corner. But when I got sight of it, I was charmed with the spotless appearance of everything. I noticed the bartender first. He was dressed entirely in spotless white. He had on a white cap, a white coat, a white shirt and tie, and white trousers. His face, hands, and nails were immaculate. I looked from him to the back of the bar. Everything was just as clean as he was. The glasses fairly shone. An effect, you say? Without doubt, and a mighty good one, if I'm any judge; just the kind of effect I would be very glad to have my office make on every patient. I paid a good price for my lemonade with pleasure. I wasn't afraid to drink it. I didn't want to wipe the rim of the glass before I put it to my mouth, for fear of what some former user might have left there. The effect of the visible cleanliness put me entirely at ease. I had another on myself with pleasure. If you get the point of my illustration, I don't need to say any more about it.

And then the address. The manner of meeting and "handling" patients, prospective or actual. The attitude of the man who knows what is needed, and who is quietly and courteously confident that he can supply it, if it can be done. The man who is master in his own office, whose courage is based on knowledge. The man who is too big of soul to "knock" his fellow practitioner, and whose business sense is too keen to bid for work on the basis of price competition, when so much better grounds for getting business are open.

And now let me begin at the beginning and put together in one paragraph the elements of our definition. Business ability demands that a dentist be clean in person, in body, and in spirit. It demands that he figure out the costs of his office and his own salary and use these as a basis for fees. It demands that he acquire the greatest degree of professional skill within his power, and that he add to it the conscience of an honest man, and with these serve his patients. And it demands one thing which the definition could not refer to, namely, that he make judicious use of those profits once they are his.

No, you don't have to be born with business ability. You get it by seeking to reproduce in your own life the business habits you admire in others. You can begin at any time to acquire it, if you are willing to pay the price in patient effort, and you can keep on getting it just as long as your mind is open at the top.

And, in my opinion, the more of it you get, the bigger and happier man and dentist you will be.

Bill

Editor DENTAL DIGEST:

I WISH to obtain a little information on the treatment of a certain class of troublesome teeth, and I will describe below a typical case, and ask your comment.

Lower first bicuspid, nerve exposed and *apparently* putrescent; no soreness. History of recent pain but no tenderness on biting. I excavated and sealed in formocresol. Patient returning, I removed treatment, but on inserting smooth broach she seemed to suffer severe pain, as if nerve was alive. Of course, if the nerve had been alive the formocresol would surely have caused severe pain, but she experienced no discomfort. Now, I could do nothing with this case, and I wish to know why the pulp would be so sensitive, with no soreness in the tooth and yet an apparently dead nerve.

Will greatly appreciate your suggestion.

W. A. K.



PRACTICAL HINTS

[This department is in charge of Dr. V. C. Smedley, 604 California Bldg., Denver, Colo. To avoid unnecessary delay, Hints, Questions and Answers should be sent direct to him.]*

† **TO POLISH PORCELAIN TEETH THAT HAVE BEEN GROUNDED.**—In the hand-piece of your dental engine put as fine a carborundum or emery stone as you can get and grind porcelain tooth until it is as smooth as can be gotten with that stone; then use sand-paper disks from coarse to fine until you can use cuttlefish disks—use plenty of them—finally use a buff and pumice and you will get the desired results.—CLIFFORD M. ROBERTS, D.D.S., Pasadena, Cal.

AN ASEPTIC STERILIZER FOR BURS, BROACHES, HYPODERMIC NEEDLES, POINTS, ETC.—First secure large glass cover such as used in railway eating houses to cover food, use large piece of plate glass on top of cabinet, small bowl of formaldehyde with small amount of borax (to prevent rust). A rack may be made of wire to place instruments, small wide-mouthed bottles (open) used for broaches, reamers, etc. In this we have an economical, tight, clean, serviceable sterilizer and it can be operated at small expense.—C. E. BERKSHIRE, D.D.S., Fairview, Okla.

[In using formaldehyde in this form for sterilization of instruments, care should be exercised not to get the solution onto the hands, as an ugly form of poisoning has been known to result from frequent immersion in same. For the benefit of anyone receiving this warning too late or heeding it not, Dr. R. P. McGee has discovered that painting the hands with tincture of iodine will cure the peculiar lingering soreness resulting from this poisoning.]

TAPPING OR PRESSING CROWN.—There is no better "stick" for tapping or pressing crowns to place in the mouth than the wooden rod of a "Kodak" film spool. It is slotted at one end and square-cut at

* In order to make this department as live, entertaining and helpful as possible, questions and answers, as well as hints of a practical nature, are solicited.

† Answer to R. T. W. in September DIGEST, page 525.

the other, and every dentist who photos in his leisure time has a good supply.—JAMES E. CALLAWAY, D.D.S., Milwaukee, Wis.

THE USE OF OIL IN THE LABORATORY.—I use 3 in 1 for the following: Keeping trays bright and smooth, oiling bolts and flask so plaster comes away readily and keeps it clean. Oil your wax slightly and see how much nicer and smoother your inlay comes out. The office girl uses a little oil on cloth to brush the cabinets and chairs and office furniture. It picks up all the dust and brightens everything. Many other uses will suggest themselves.—H. W. KELLY, D.D.S., The Dalles, Ore.

To PREVENT SPLINT RIVETS FROM SHOWING IN THE ANTERIOR TEETH.—After drilling holes through the teeth make a wax splint in the usual way. Force pieces of black lead (lead pencil) through the holes in the tooth and through wax. Remove lead and wax, replace leads in wax, fasten, invest and cast. Remove the leads and countersink holes on lingual side of splint and polish. Countersink deeply on the labial side the holes in the natural teeth. Make a piece of tubing of 22 kt. plate to fit hole. Cut the tube a little short so that in passing it through the splint and tooth from the lingual side it will not reach through the enamel. It is well to spread the lingual end of the tube a little so that it fits into the countersink in the splint and will not push through. Cement in the usual way and spread tube at both ends until tooth is firm. Then fill the hole in tube with synthetic cement and no gold shows from the front. For riveting, I use an old plate punch remodeled, so that it has two tapering steel points that meet.—CLIFFORD M. ROBERTS, D.D.S., Pasadena, Cal.

To MAKE SMALL ANTERIOR BRIDGE.—In making small anterior bridges I seldom run a model for the final fitting of the substitute to the crown. I place a small mass of modeling composition back of the crown and space, have the patient close and press same outward with the tongue. Then press the already backed facing into exact position and hold it firmly. This puts it in correct relation to the bite. When hard, remove the composition, fit the crown and sub. in same; if facing is Steele, slide it off and range front of backing. Flow investment compound over front of piece. When hard, remove composition by dry heat, and solder. By this method, an extra five minutes at the chair saves all the running-up of models and articulating same.—JAMES E. CALLAWAY, D.D.S., Milwaukee, Wis.

To REMOVE GOLD SHELL CROWN.—With a drill, which is not quite as large as the shank of a bur, make a deep opening just beneath the

occlusal surface and starting on the buccal surface of the crown. This opening ought to extend between the solid part of the tooth and just inside the occlusal of crown, and be as deep as the center of tooth. Have an old exploring point cut back so as to be heavy enough not to bend and of a size to fit to end of hole. Insert and pry gently at first with the center of tooth as fulerum and you will be surprised how easily the crown will begin to wriggle off.

To Repair Crown.—Lay small piece of backing against hole and inside of crown, and flow a small bit of solder with mouth blow-pipe from the outside.—H. B. CHILD, D.D.S., Minneapolis, Minn.

SOME HELPFUL HINTS.—Wrapping cocaine billets in a whisp of cotton, facilitates in their handling.

Give your patient a salted soda cracker after applying dentinol. It helps wonderfully in getting the taste out of the mouth.

Covering a burn or scald with syrup or molasses, using it freely while healing takes place, will prevent blisters from forming and relieve a great deal of suffering. This has been tried and proven.

After extracting, wash out the sockets with dioxogen, and pack on cotton; or without, the following bismuth paste, and you will be pleased at the way healing takes place. In case of an abscess, I find it better to redress a second or third time, say every other day, though many times you will never see the patient after the first sitting, the wound heals so rapidly and well. Try it on your next impacted third molar case, and watch the relief from pain, because the bismuth keeps the pus down. This method has enabled me to get \$1.00 for extraction instead of the customary 50 cents. The paste is odorless and tasteless and is made as follows:

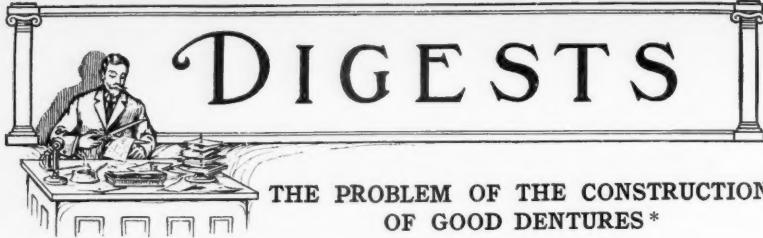
Bismuth subnitrate by weight 3 parts

Stearine (or Beeswax) " " 3 "

White vaseline " " 4 "

Melt the stearine and vaseline, bringing to a boil. Slowly add to the bismuth while triturating in a mortar.—J. H. BLACHLY, D.D.S., Manhattan, Kan.

TO HOLD AN INLAY WHILE POLISHING.—Take a piece of bamboo with an opening about the size of a pencil or pen, and fill with modeling compound, rounding it up over the end. By warming the compound and imbedding the inlay, you can grind and polish to your heart's content.—J. H. BLACHLY, D.D.S., Manhattan, Kan.



DIGESTS

THE PROBLEM OF THE CONSTRUCTION
OF GOOD DENTURES*

By T. W. PRITCHETT, D.D.S., WHITEHALL, ILL.

* * * * *

THE attitude of your Board of Dental Examiners on the subject of artificial dentures and their construction as relating to their experience and duties as examiners may be of some interest to the Society. Prior to 1905 the numbers examined by the Board were few, and these confined entirely to practitioners of some years' service, so that no particular data of merit or demerit can be drawn from those examinations, except to say, they did not show any evidence of an awakening to the consciousness that a new era was dawning in the construction of artificial dentures—mediocrity and below being the rule, with but a few exceptions.

Our law of 1905 requiring all who begin practice in the state from that date to take our examination brought a great influx of applicants before the Board. More than 75 per cent. of these probably were recent graduates from the dental schools, fresh and long in theory, and supposedly short in experience and practice—apparently requiring a different mode of examination and grading to restore the balance between knowledge acquired by theory and the application of it by practitioner.

In passing, I will say that it has not been apparent to the Board that those of some years' experience in practice have shown any marked superiority in the dominant phases of construction, under the old regime of teaching—over the recent graduate under similar teaching.

We made some rules and requirements to govern the prosthetic clinics, and our troubles began. Quite early a number of questions protruded themselves upon us, among them these, "When is a denture a denture?" In other words, "Have we a standard by which to determine or answer that question?" "Who, where and what is the authority?" "What relation or status does prosthetic dentistry hold to dentistry as a whole, and what degree of proficiency as compared with all the other branches should be exhibited by the work of hand and head to entitle the applicant to a certificate of proficiency?" "How execrably bad must a denture be in all the salient features that

* Read before the Illinois State Dental Society, May, 1911.

make for utility and comfort, which, judged by all the canons of experience, could perform no valuable function whatever, to demand and justify a board in refusing to pass an applicant for this defect alone?"

These are some of the questions and matters that have given us worry and tribulation. In truth we have not rejected a single applicant for incompetency in practical prosthetic dentistry who successfully passed the other branches, out of 700 or more whom we have legally commissioned to practise dentistry in Illinois, during the last five years. We certainly have had a percentage of as bad examples as ever needed to be labeled dentures to identify them as such.

Upon this confession you may think or say, the Board should be damned for inconsistency. But wait; before saying it, please answer the questions propounded, and if you would still condemn, and say it, then in the name of reason what would you do with that host of incompetents who are flooding the country with bad dentures in a legal way?

That is our story; here is another: Beginning with the June examination of 1905, with a class of some 118, improvement was discernible. Some of the improved articulators were being used. A few examples were in evidence of improved teaching upon the basic points of construction, and a few instances of very fine technie were displayed. About 10 per cent. apparently showed some acquaintance with the Bonwill treatment of occluding surfaces, the great majority, however, showing old-time methods of conservatism.

Annually the examinations are showing a steady improvement in some of the cardinal phases of occluding and balancing contacts, until in 1909, with a class of 120, a tabulation of one-half section of the class gave a percentage of 7 per cent., who made grindings upon the occluding surfaces of the bicuspid and molar teeth.

While this apparent indication of improvement is gratifying to the Board, there was that about it which creates a suspicion that much of it was not acquired by a systematic and well-grounded course of teaching, but was purloined, so to speak, upon the part of many who kept close observation upon those who were well grounded, and who gave them friendly coaching assistance. Another proof that up-to-date teaching had not been given to many of these applicants was in the worthless character of the paraphernalia with which they were equipped to do their work.

The June class of 1910 was the banner class. Out of 106, 80 per cent. came provided with the latest and best articulators, capable of registering the condyle paths, with other up-to-date equipment, and in the selection of teeth 60 per cent. were of the new moulds called

"Anatomic," some of which resemble Nature's work when in her best moods. With only their college experience, which is necessarily limited, a large number of these men instructed in the use of the newer equipment and the newer forms of teeth, were able to demonstrate a technic in denture construction that was beautiful and inspiring to behold.

The Board, noting these discrepancies, and also noting the many beautiful examples wrought by up-to-date teaching and the employment of up-to-date equipment, reached the conclusion that the time had arrived when it should exercise all its powers of persuasion and coöperate with any and all sources promising aid, hoping thereby to bring about an uplift of this much neglected branch of dental science.

To accomplish this object it may become necessary to use some compulsory means, with the view only of reaching the goal of our desires more speedily.

The following Notice, or "Rules of Procedure" governing examinations in Practical Prosthesis have been formulated by the Board and copies sent to all the Dental Schools and Colleges of the country:

ILLINOIS STATE BOARD OF DENTAL EXAMINERS

*Supplemental Requirements and Instructions Governing the Clinical
Prosthetic Procedures Relating to Rule VI.*

In view of recent closer study and improvement in the management and arrangement of the occluding surfaces of artificial teeth, whereby the greatest masticating efficiency can be attained, the Board deems it a duty to require of those who are to serve the people of the state, *a good working knowledge of the most approved methods of construction of artificial dentures.*

To these ends and to approximate as nearly as possible the conditions that apply to practical prosthesis, the applicant is required to furnish plaster casts prepared by himself, for a full denture (both upper and lower) made from impressions taken from the same mouth. *These to be mounted upon an anatomical articulator capable of registering the condyle paths in each individual case,* the bite plates to be in position, and the work continued to the point of readiness for trial in the mouth.

The points or counts considered in grading are as follows:

First—Treatment of the impressions and casts to secure retention.

Second—Selection and general arrangement of the teeth. Occlusion.

Third—Contour for restoration of the features.

Special notice will be taken in the grading, *as to the occluding sur-*

faces of bicuspids and molars, whether they are of such form as will grasp, cut and crush food substances effectively; the balancing contacts when lateral and protrusive movements of the mandible are made; and the proportionate size of the teeth selected for the case in hand.

It is obvious that impressions and casts made from dummies or otherwise than from the natural mouth, will not fulfill the grade requirements. The Board will not give encouragement to half-hearted and perfunctory efforts on the supposition that nearly anything is good enough to pass the applicant.

Good equipment is necessary to attain correct results, hence an *up-to-date articulator is an indispensable adjunct* in the construction of *up-to-date artificial dentures*.

Crowns.—The applicant will also be required to construct a banded porcelain-faced crown upon the root of an anterior tooth, in the presence of the Board.

The grading points are as follows:

First—Preparation of root.

Second—Adaptation of band to root.

Third—Occlusion. Form.

Fourth—Finish.

In the grading, especial notice will be taken of the relation of the band to the gingivæ, and to the contour of the lingual surface.

In order to secure something of uniform procedure, it is suggested that the applicant take an impression of his own natural teeth, make plaster casts, cut off a given tooth, adapt and insert the root of an extracted tooth, and complete the case in accordance with the points designated in the grading.

It is further suggested that the applicant supply himself with a goodly number of extracted teeth from which to select a suitable one for his case.

The applicant must furnish all instruments and materials for all practical work.—*The Dental Review*.

(Dr. J. H. Prothero's paper on this same subject is expected to be published in the January number.)

DENTAL SOCIETY MEMBERSHIP*

By C. C. CORBETT, D.D.S., EDWARDSVILLE, ILL.

. . . . I want to make a most earnest plea to every member of the profession in Illinois to join the State Society through his

* Monthly Bulletin of the Illinois State Dental Society, Abstract from May, 1912, Meeting.

Component Society and become a constant attendant at the meetings of these two Societies. You cannot afford to locate in some small town and settle down and never rub up against the profession; just as sure as you do you will very soon become a back number. And just so sure at some future time some live man will enter the field and take a large portion of your practice from you, and do twice as much business as you are doing, at better fees, which business should belong to you. You cannot afford to miss a single State Meeting, because if there is anything new, it comes out at these meetings, and the methods of practice are so constantly changing and improving and there are so many things that are new in technic, that if we do not constantly attend dental societies we are soon left far behind. As an illustration, I would speak of two men who were leaders in the dental profession during their time for a period of thirty or forty years. I refer to Drs. McKellops and Morrison, of St. Louis. These men were among the most skilled men of their age, they have been dead only a very few years, but if they were to rise up and start in practice where they left off, they would be very far behind, so far behind that they would be temporarily lost. Neither of these men ever heard of the cast inlay and its almost countless number of advantages. At the time of their death school inspection was a mere speck on the dental horizon, and the present great wave of oral hygiene and prophylaxis had not started. Now these subjects have reached a cyclonic movement, and justly overshadow all other subjects, and are destined in time to reach every city, town, and hamlet, and their benefits to humanity be so far-reaching that it staggers the mind to attempt to comprehend it.

Another illustration: One of our prominent members of the State Society, who has not missed a meeting for over fifteen years, until last May when he was called away on business, did not know until the other day the advantages of Taggart's investment compound, and the technic of mixing the same, which were explained at the Peoria meeting. I mention these illustrations to show how impossible it would be to keep in front in the practice of dentistry without constantly attending Dental Societies.

The State Society has at least eighty clinics at its annual meeting each year; it would hardly be possible for a dentist to watch all these eighty clinics, but he can pick out fifteen or twenty that would interest him most, and watch the technic of these operations, which would doubly pay him for his time and expense in attending the meeting. Always remember that it is the little points that we gather at these meetings year after year, watching the clinics, listening to the papers, taking part in the discussions, in our conversations in the hotel cor-

ridors, telling how certain operations were performed, and how certain cases were handled, which combine to make us masters instead of entered apprentices, and go to make our services so valuable to the public, that a better fee may be demanded, to be cheerfully paid, with a "I thank you for the service you have rendered me."

It was through the influence of the late Dr. Rohland that I joined the State Society, over twenty years ago, and it was through his influence that I became one of the charter members of the Southern Illinois Dental Society, twenty-six years ago, and have only missed one meeting in each Society in that time. I believe that if I had never attended a Dental Society, and had continued to practise in the rut that I was in, my services to the public would not be worth more than half what they are to-day, and I do not believe that I would be doing more than half the business I am doing. One thing more; do not ever refuse to take part on the programme, if there is one thing that you have thought of, or that you do a little different from anyone else, allow the programme committee to put you down for that as a clinic, and if anyone comes along and says, I have been doing that for a long time, ask him why he has not shown it to the profession, and say to him that you are trying to be a benefactor while he has kept his light under a bushel and is therefore unworthy!

Always stand ready to help these meetings along, for you get out of them just what you put into them.

DENTAL DISEASE AS IT AFFECTS THE MIND

By HENRY S. UPSON, M.D.

Professor of Neurology in the Medical Department of the Western Reserve University, Cleveland, Ohio

(Concluded from the November number)

NEITHER KIND NOR LOCATION OF LESION DETERMINES THE
CLINICAL TYPE

The patients who have promptly recovered or greatly improved have shown widely differing forms of aberration, including not only mania, melancholia and other emotional disorders, and mental and moral defects in children, but also dementia as it occurs from adolescence to senility, and paranoid forms of insanity.

There is no difference in the purely mental symptoms to indicate the location of the lesion. No specific symptoms result from impaction

of third molars, as compared with the same condition of the canines, or of these as compared with the same condition of the bicuspids or incisors. Patients have recovered from obsessions, from melancholia and from incipient dementia alike by relief of lesion of third molars, and lesions confined to the canine region, as well as by relief of lesions distributed more widely through the jaws. Considering any region, the consequences of its disease vary in different patients and at different ages.

If instead of considering the lesions one by one, and tracing their results, we single out each symptom-complex and look for its cause, the result will be the same, no matter what psychosis is selected. The causes of each and every symptom or symptom-complex in mentality are variable, multiple and diverse.

The most that can be said, then, of either location or kind of lesion as determining varieties of mental symptoms is a statement of probabilities. Indigestion may make more people irritable or depressed than happy, just as heart disease is the cause of more morbid anxiety and fear than of elation, and pulmonary consumption probably has hope and cheerfulness as a consequence rather than depression. But these are matters of frequency, and do not show a specific mode of reaction.

ABSENCE OF PAIN IS NO PROOF THAT A LESION IS HARMLESS

Essential in handling these problems is a full and comprehensive grasp of the two facts that pain is a symptom and not a lesion, and that dental irregularity in the form of impaction is a lesion and not a symptom. The doctrine of the harmlessness of lesions is losing ground rapidly. Dental irregularity may be harmless, but when a tooth is driven head on against the periodontal membrane of a neighboring tooth, richly innervated, dental irregularity takes on a new aspect; it becomes a lesion, and is to be reckoned with accordingly.

Suppuration and decay are no better in the teeth and jaws than they are in other parts of the body. An alveolar abscess is always a menace, always a source of greater or less toxemia, with deleterious results on kidneys, heart and blood, as well as the digestive tract; but when, as often, it is pent up, with no outlet into the mouth, it takes on in addition an irritant quality like that of the small amount of pus constituting a felon. It is then not only harmful to the general health, but often early disastrous to nerves and brain.

That painless lesions do harm is apparent in the series of cases under consideration. Even in the individual case it is evident that aberration, insomnia, psychomotor restlessness and the like are not dependent on pain, since they do not vary with it, disappearing as it

diminishes in intensity. Whether one studies marked insanity, in which pain is commonly absent, or ordinary cases of toothache, in which the mind is often indeed disordered, but as a rule comparatively slightly, it is equally evident that the nervous and mental symptoms usually either part company with pain or vary in inverse proportion with it. The patient with toothache is sleepless, restless, despondent, at times when the pain is not in evidence; in dementia precox and other severe insanities local pain is often absent throughout the course of the disease, or early disappears. The lack of definiteness of proportion between the pain and the other symptoms shows that they have among them no relationship of cause and effect, but that in mild as in severe cases the mental state is directly dependent on the lesion.

INSANITY A RESULT OF PERIPHERAL IRRITATION

It is often assumed that in order to affect the mind a noxious agent must reach its organ, the brain. This assumption leaves out of account the fact that the peripheral nerves, the prolongations of the brain, have as the reason of their being the bringing of mental faculty into contact with the body and the outer world. Nerve fibers bring irritation, though not the irritant, to the brain.

Aside from this, which is a theoretical consideration, the appeal to experience shows that the distant noxious agent is as disastrous in its effects on the mind as is the poison which circulates. Psychoses due to the pure irritation of impaction are in no way different from those due to alveolar abscess, and critical study of suppurative processes shows that not the quantity of the absorbed pus, but its situation as an irritant, is the determining factor in its effect on mentality. A little pus confined or acting on a nerve as it enters the tooth canal is at times responsible for the severest nervous and mental derangements.

CONCLUSIONS

Success in solving the mystery of the familiar association of nervous and mental disorders with irregular and otherwise abnormal teeth is dependent on the thoroughness of the diagnosis and completeness of elimination of the corresponding lesions.

That dental disease furnishes a peculiarly favorable field for research is due to the fact that it is common and usually causes severe chronic irritation, and that the lesions may be actually seen and watched by aid of the X-ray.

Neurologists are daily seeing patients of sensitive nervous organization whose mental balance has been overthrown. The sufferers shrink from pain and avoid the dentist. Many of them have mouths filled

with pus and jaws riddled with it, with teeth decayed to the pulp, impacted and exostosed. Study of irritant processes in the body generally, whether by injurious mechanical conditions, intoxications or disease, shows their great effects on mentality. The relations existing between suppurative lesions, misplacement and decay in the jaws, in such a series as the one under discussion, seem to indicate that here, as in other parts of the body, thorough elimination of such lesions is desirable, in fact necessary, to the preservation or restoration of mental integrity.—*The Journal of the Allied Societies.*

A PROSTHETIC USE OF ALUM

SIR: About four months ago I encountered in practice something which I think has been experienced by a great many others, and the publication of the case may perhaps be useful. A patient aged forty came to see me whose oral condition was as follows: Upper jaw edentulous—teeth extracted about three years before; gums badly shrunken and quite spongy. The patient had had nine sets of teeth made by as many dentists; none of the sets, however, would stay up over a week. I made a set—with the same result.

I got the patient to come in again, when I had him rinse his mouth with a strong solution of alum—one half ounce of lump alum dissolved in three ounces of warm water, the patient rinsing the mouth and retaining the solution about one minute. This caused the gums to shrink, and while this condition obtained I took a plaster impression and bite. I then made a set of teeth that has given him entire satisfaction for the past six months. The idea was to cause as much shrinkage as possible in the spongy gums, so that with returning normal expansion the plate should fit tightly. This plan will be found worth trying.

Yours truly,
R. B. MOORE, D.D.S.

SOLON, IOWA, September 21, 1912.—*The Dental Cosmos.*



BOOK REVIEWS

THE PREVENTION OF DENTAL CARIOSIS AND ORAL SEPSIS. Being the Cartwright Prize Essay of the Royal College of Surgeons of England for 1906-1910, with some Additions. By H. P. PICKERILL, M.D., Ch.B., M.D.S. (Birm.), L.D.S. (Eng.), Professor of Dentistry and Director of the Dental School of the University of Otago (N. Z.). Cloth, 8vo. Baillière, Tindall and Cox, 1912. In United States, \$2.75.

Professor Pickerill's book, "The Prevention of Dental Caries and Oral Sepsis," marks an epoch in dental history.

In its particular field it has achieved a position in dental science analogous to that which Darwin's "Origin of Species" achieved in natural philosophy.

One very striking analogy is due to the fact that Professor Pickerill, in the University of Otago, New Zealand, and Professor Geis, of College of Physicians and Surgeons, each working upon the solution of the same problem unknown to each other, arrive at almost the same conclusion about the same time.

Darwin and Wallace, it will be remembered, were investigating the origin of species at the same time, and, unknown to each other, arrived at the same general conclusion within a short time of each other.

In the preface Professor Pickerill states, "When this work was commenced, nearly six years ago, a 'plan of campaign' was drawn up, to which it was decided to adhere, and to continue the work until the whole field had been covered, or at least investigated." How rare this is in the investigating of dental subjects!

In the chapter on "The Pathology of Dental Caries" he states, "the two essential attacking forces in this disease (caries of the teeth) are (1) the acid-forming organisms of the mouth, (2) the presence of fermented carbohydrates—the first *active*, the second *passive*."

Further he states, "The phenomena are profoundly modified by the character and number of organisms present, the variety and amount of carbohydrate material, *the amount, alkalinity, and diastatic action of the saliva*, the resistance of the enamel surface, the shape and development of the jaws, and the disposition of the teeth."

The experiments to determine the effects of each of these factors

upon the acceleration and retardation of dental caries, undertaken so scientifically by Professor Pickerill, are worthy of the attention and serious study of every dentist who is earnestly trying to prevent destruction of teeth.

A few chapter headings and sub-headings will indicate the interest and value the book holds for the up-to-date dentist, scientific or "practical":

CHAPTER IV.—"The Resistance of the Enamel Surface as affected by the disposition of the teeth; Effect of soft food on the development of the jaws and resistance of the teeth; Heredity and Dental Caries."

CHAPTER V.—"The Enamel Surface—its physical and chemical properties, and power of resistance."

CHAPTER XI.—"The Saliva," is one of intense interest and great value.

CHAPTER XIII.—"The reduction of the bacterial and carbohydrate factors by artificial means."

For those who are interested in the field of educating the public, and particularly children, and promotion of legislation and measures whereby the municipal, state, and federal governments shall undertake the protection of the teeth, the last three chapters in the book will be of very great interest and value.

The work as a whole is most illuminating. The variety and number of experiments undertaken give it a marked position of scientific value. The wealth of new material, the illustrations, and general make-up of the book certainly stamp it one which every progressive dentist should possess, and without which many perplexing and unanswered problems of dental caries will remain perplexing and unanswered.

A. M. NODINE.

SOCIETY AND OTHER NOTES

Officers of Societies are invited to make announcements here of meetings and other events of interest.

CALIFORNIA.

The next meeting of the California Board of Dental Examiners will be held in San Francisco, at the College of Physicians and Surgeons, beginning on December 4th, at 10 A.M. Address C. A. HERRICK, 133 Geary Street, San Francisco, *Secretary*.

COLORADO.

The next regular meeting of the Colorado State Board of Dental Examiners will be held at the Capitol in Denver, Tuesday, December 3, 1912. All applications for examination must be filed with the Secretary before that date. Address J. L. HOWELL, 532 Mack Building, Denver, Colo., *Secretary*.

IOWA.

The next meeting of the Iowa State Board of Dental Examiners for the examination of candidates will be held in Des Moines, commencing December 9, 1912. For application blanks and particulars, write J. A. WEST, 417 Utica Building, Des Moines, *Secretary*.

MINNESOTA.

The annual midwinter meeting of the Minneapolis Dental Society will be held in the Masonic Temple, Minneapolis, Minn., on Friday and Saturday, January 17 and 18, 1913. O. DEFOREST DAVIS, 404 Donaldson Bldg., Minneapolis, Minn., *Secretary*.

NORTH DAKOTA.

The next meeting of the North Dakota Board of Dental Examiners will be held in Bismarck, North Dakota, January 14, 1913, and continue four days. All applications must be made to the Secretary by January 4, 1913. F. A. BRICKER, *Secretary*.

OHIO.

The Ohio State Dental Society, which usually meets in Columbus, will hold its annual meeting December 3d to 5th, at Hotel Sinton, Cincinnati. A big meeting is assured.—F. R. CHAPMAN, 305 Schultz Building, *Secretary*.

PENNSYLVANIA.

The next annual meeting of the Institute of Dental Pedagogics will be held in Pittsburgh, Pa., January 28-30, 1913. An unusually interesting program has been arranged and no progressive dental teacher can afford to miss this meeting.—FRED. W. GETHRO, *Secretary*.

The next regular examination of the Pennsylvania Board of Dental Examiners will be held in Philadelphia and Pittsburgh on Wednesday, Thursday, Friday and Saturday, December 11, 12, 13 and 14, 1912. Application blanks can be secured from the Department of Public Instruction, Harrisburg.—ALEXANDER H. REYNOLDS, 4630 Chester Avenue, Philadelphia, *Secretary*.

TEXAS.

The next meeting of the Texas State Board of Dental Examiners, for the purpose of examining applicants for a license to practise dentistry and dental surgery in the State of Texas, will be held in Austin, Texas, December 9, 1912, at 9 A.M.—J. M. MURPHY, Temple, Texas, *Secretary*.

WISCONSIN.

The Wisconsin State Board of Dental Examiners will convene in Milwaukee, at the Wisconsin College of Physicians and Surgeons, on Tuesday, December 17, 1912, at 10 A.M., for examination of applicants to practise in Wisconsin. Dental diploma to be presented in advance of Examination.—F. A. TATE, *President*; W. T. HARDY, 422 Jefferson Street, Milwaukee, *Secretary*.

**STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC.,
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THE DENTISTS' SUPPLY COMPANY,
JOHN R. SHEPPARD, Sec'y & Treas.

Sworn to and subscribed before me this

4th day of October, 1912.

HENRY B. PEIFFER,

(Seal) Notary Public.

CHICAGO DENTAL SOCIETY

THE officers of the Chicago Dental Society are planning a large celebration for Friday and Saturday, January 31, and February 1, 1913. The program includes two days of clinics by selected men from all parts of the country, one evening of papers by men of international reputation, concluding the two days' meeting with a testimonial banquet to our esteemed confrère, Dr. Truman W. Brophy, of Chicago. Any dentist who has a new or interesting clinic to give at this meeting is cordially invited to correspond with the Chairman of the Clinic Committee, Dr. Fred. W. Gethro, 917 Marshall Field Bldg., Chicago, Ill.

PATENTS

- 1,024,152, Method and means for producing dental plates, Henry J. Smith, Philadelphia, Pa.
- 1,024,153, Dental plate, Henry J. Smith, Philadelphia, Pa.
- 1,024,773, Means for stacking toothpicks and the like, Albert H. Hall, Peru, Me.
- 1,024,774, Mechanism for stacking and conveying toothpicks, Albert H. Hall, Peru, Me.
- 1,025,751, Tooth-brush, August O. Kretzschmar, Endicott, N. Y.
- 1,026,081, Waste-cotton container, Louis P. Dorais, Eureka, Cal.
- 1,026,186, Cord or cable supporting bracket, John V. Trenaman, New York, N. Y.
- 1,026,213, Artificial tooth and crown, Joseph Kohn, Philadelphia, Pa.
- 1,026,494, Carbordum dresser, A. C. Champagne and J. N. Brahn, Jersey City, N. J.
- 1,026,564, Electric water-heating syringe, Harry M. Crawford, Lima, Ohio.

Copies of above patents may be obtained for fifteen cents each by addressing John A. Saul, Solicitor of Patents, Fendall Building, Washington, D. C.



MY DAUGHTER surprised me some time ago by telling me my teeth were beginning to show the effects of constant smoking.

"I didn't give the matter much thought, however, until one day at the office I noticed that my senior partner had the cleanest, whitest-looking teeth I had seen in many a day. Knowing he was an inveterate smoker, like myself, I asked him about it.

"He turned to me with an engaging smile—I realized then that his teeth were what made his smile so engaging—and replied 'Pebeco Tooth Paste, twice a day.'

"I took the hint and bought a tube on the way home that evening.

"A few months later I made my annual sojourn at my Dentist's. His first remark was:—

"'Humph! Must have quit smoking.'

"I smiled to myself, realizing that Pebeco had done it and that he was paying this preparation a great compliment. Later he told me my teeth were in splendid condition, and I have sworn by Pebeco ever since."

(Quoted from unsolicited letter of user of Pebeco, name on application.)

Pebeco Tooth Paste inhibits fermentation and therefore prevents decay. It was originated to neutralize "Acid Mouth" in the hygienic laboratories of P. Beiersdorf & Co., Hamburg, Germany. It is therefore scientifically formulated and chemically correct.

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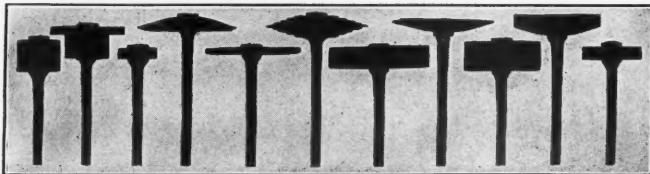
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Adjustment for tubes

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ANTISEPTIC BALSAM
VARNISH. AN ANTI-
SEPTIC, VERY STICKY
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LINING IS THE RESULT.**

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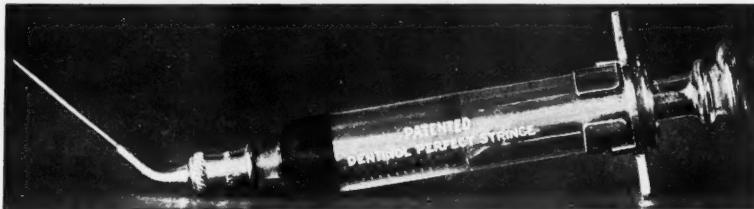
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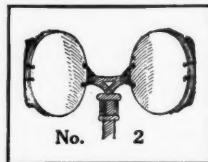
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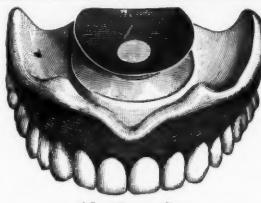
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¶ We want to tell you about the construction in detail. Write for our Catalog, turn to pages 37 and 44 and let us describe these cabinets to you. On page 36 of the Catalog, the No. 90 is illustrated in natural colors, so that you can see just how it will look in your office.

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It is all thoroughly well made and the chairs are fitted with Genuine Spanish Morocco Leather, loose cushions.

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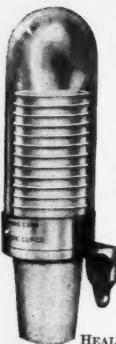


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Get your orders in early.

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Why Dentists Do Not Succeed

The Business Problems of a Profession

By FREDERICK CROSBY BRUSH, D.D.S.

(The Press of The Dental Digest. Price \$1.00)

The author says in his preface, "He is convinced that the reason that some (he might have said many) have not succeeded as they anticipated has not been due to their lack of professional ability so much as to their lack of business ability and a knowledge of the business principles that are involved in all transactions."

It is a well-known fact that many poor operators are overrun with patients, while many excellent operators could see more patients than they do. Many very superior men professionally are driven to other occupations, and others so poorly equipped professionally that the term dentist is a misnomer, live in fine houses, drive automobiles and enjoy prolonged and frequent vacations. If a good business man can do so well financially with little or no professional skill, then there is a most excellent reason why the man with the superior professional ability, who lacks business methods, does not succeed.

"The Business Problems of a Profession" points the way to success and treats of problems important to the young man just seeking a location after graduation, as well as the oldest practitioner.

It is the opinion of the writer that no one can read this book carefully without greatly increasing his income, by adopting the methods of Dr. Brush as set out in this volume.—*THE DENTISTS' RECORD*.

The above is entirely unsolicited testimony. The writer is the very best authority. He sees the value of the book. The price of the book is insignificant. Its worth to the average dentist cannot be estimated. Do not wait till the edition is exhausted. Order now.

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PRESENT IN NORMAL FRESH SWEET MILK

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Dioxogen should be specified because it is the purest and costs no more than poorer products.

THE OAKLAND CHEMICAL CO.
NEW YORK

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This interesting photograph and letter was received:



"Dear Sirs:

Out of gratitude for the 'Pathfinder' and in the hope that it may interest you for a moment, I enclose a photo of one of your Imperial Columbia Chairs and a patient of mine from Borneo.

Your dictionary will call the gentleman in the chair an Orangoutang. Here he is known as an *Orang outang*—pronounced as two words, accent on the first syllable of each word. In the Malay language 'Orang' is *man* and 'Utang' is *jungle*—hence, a literal translation is a 'jungle man'. Yours truly, _____."

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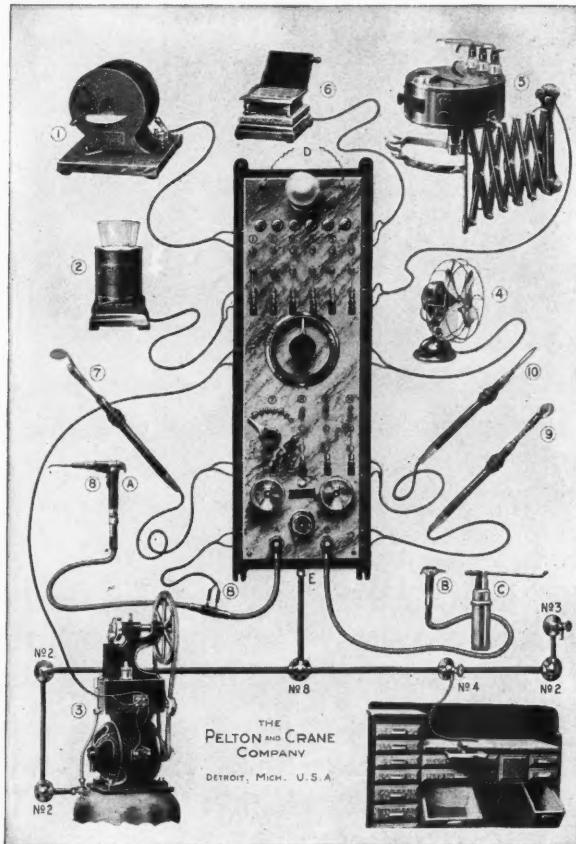
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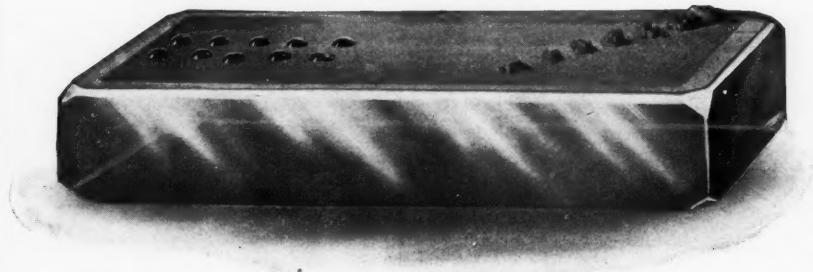
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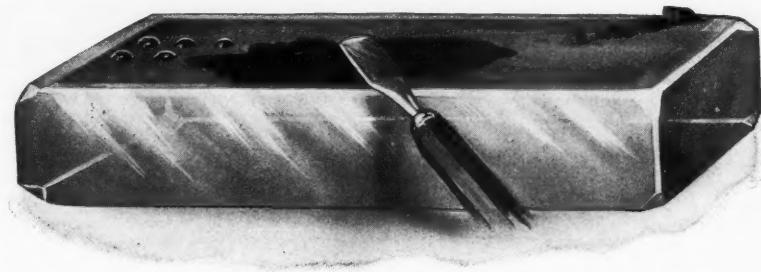
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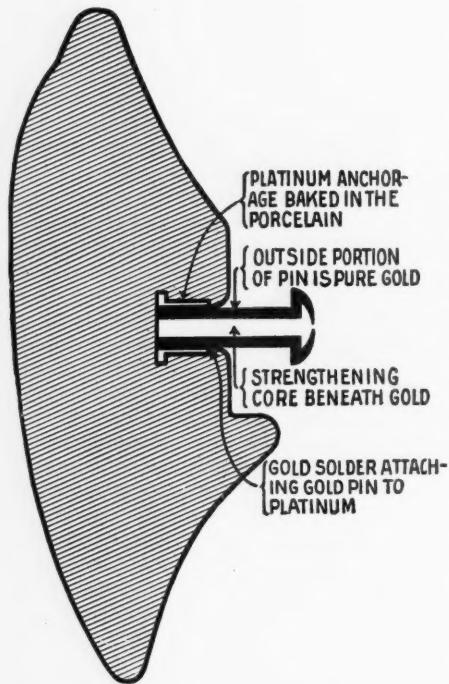
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3. That in order for corrective measures to have their most beneficial effect, *they must be instituted by the age of six years, or seven at the very latest.*
4. That such corrective measures must take in a proper view of the nose, mouth and throat as closely related in function.
5. That irregularities of the temporary teeth may be easily and successfully corrected, *and that their proper correction insures eruption of the permanent teeth in proper positions.*

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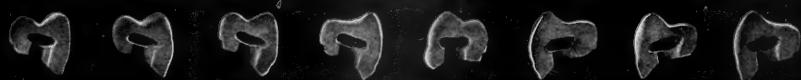
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DENTURES are not of much real service unless they masticate food. That power is largely dependent on characteristics **which must be given to the teeth by the manufacturer.** It is well worth your while to know what these characteristics are, and to judge for yourself whether or not they are present in any given makes of teeth.

Mesio-Distal Relations of the Posterior

The very first and simplest requirement is that the teeth shall be carved to proper mesio-distal relations. If this is not done, the movements of the mandible will at once dislodge one or both dentures.

The buccal cusps of each set must pass through an interdental space or buccal groove of the opposing set. **They must fit the grooves,** and the upper and lower buccal cusps must interdigitate so closely as to form a wall which shall prevent the escape of food when the mandible moves upward in lateral occlusion, and crushes it. **The lingual cusps must pass in very much the same relations.** Some makers of imitations of the anatomical moulds of The Dentists' Supply Company forgot about the lingual cusps. They saw how beautifully the buccal cusps in the anatomical moulds pass, and copied that movement as well as they could. But their knowledge didn't carry them far enough to make the lingual cusps pass properly.

The first requirement of the teeth then, is that the buccal and lingual cusps pass properly and fence the food in both

Continued on next page

Continued from preceding page

lingually and buccally. That requirement is best met by the anatomical moulds of The Dentists' Supply Company.

The Rectangular Groove

The forms of the teeth must be such that food is held between the teeth, as the jaws come together. Simple as that statement seems, it has escaped some makers of improved forms of teeth.

Food is held in two ways—first, by the general shape of the occlusal

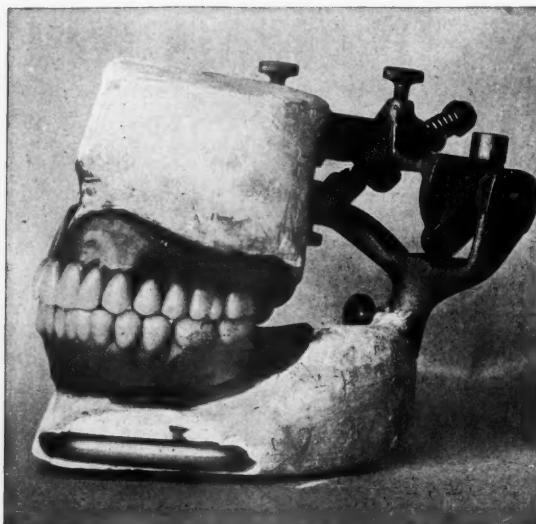


FIG. 1

Not only must each buccal cusp close opposite an interdental space or buccal groove, but it must pass through that space or groove in articulation. This is essential to the stability and efficiency of the dentures.

surfaces; and second, by the detailed form of those surfaces. Note what is meant by "the general shape."

If you examine the occlusal surfaces of all the natural bicuspids and molars on one side of one jaw, as a whole, you will see a longitudinal groove formed by the middle sulci of those surfaces. In young teeth, it is quite deep; in old teeth, it is shallow. When the mandible is thrown far enough to one side so that the buccal cusps interdigitate, the upper and lower grooves are opposite each other. They form a Rectangular Groove. This is shown in the following illustration from Dr. Gysi's articles. **If the groove is not present, no food can be held between the occlusal surfaces of the teeth as the mandible moves up against the upper, and the patient will have nothing to crush.** Bear that fact in mind while another point is discussed.

Continued on next page

The Depth of the Rectangular Groove

Because vigorous people of middle or later age so far wear down the cusps of natural teeth, that little or no rectangular groove remains, there has been a general impression that artificial teeth should exhibit cusps worn to the same degree. **THAT WORN CONDITION APPLIES TO NATURAL TEETH FIRMLY ROOTED IN THE JAW.** It does not apply with equal force to artificial teeth, mounted on relatively loose dentures. So some of the manufacturers who have been spurred into offering improved forms of teeth, have produced teeth in which the cusps are so worn as to leave very little rectangular groove. **Since the patient can crush only the food lodged in the rectangular groove, the less groove there is, the less food will be crushed.**

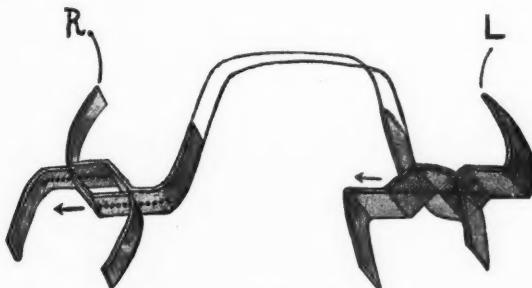


FIG. 2

When the upper and lower buccal cusps are interdigitated, as seen below the letter R, there should be a considerable rectangular space as here shown. Since only the food held in this space can be crushed, teeth which do not form such a space have little masticating power.

If you examine the occlusal surfaces of the anatomical moulds of The Dentists' Supply Company, as shown slightly enlarged in Figure 3, you will see that provision for an adequate rectangular groove has been made. **One of the reasons for the great success of these teeth, from the patients' viewpoint, is the fact that the general forms of the surfaces enable them to hold sufficient food to be crushed.**

How This Misled One Manufacturer

One manufacturer saw this groove in the teeth, but did not understand the science of its formation and purpose. He thought it meant deep cusps. And forthwith deep cusps appeared in his moulds. This groove does not mean deep cusps in the sense of deep articulation. It means ample food space in the final crushing movement of the mandible. It affects the depth of the articulation only in a general way. Deep cusps may not mean ample food space. Even if they

Continued from preceding page

did, they are a danger to the dentures, since they favor "hitting" in lateral movements and tend to dislodge the dentures.

Other Manufacturers Went to the Opposite Extreme

They produced teeth with so little rectangular groove that little food could be retained. They wanted shallow cusps, and not understanding the science of teeth forms, made them at the expense of the groove. If they had put into the formation of their teeth, the study that The Dentists' Supply Company put into the carving of the really anatomical moulds, they would not have made that mistake.

The Detailed Formation of the Occlusal Surfaces

should be such as will hold the food, as will aid in the work of grinding it, and will provide escape ways for the finely ground food.

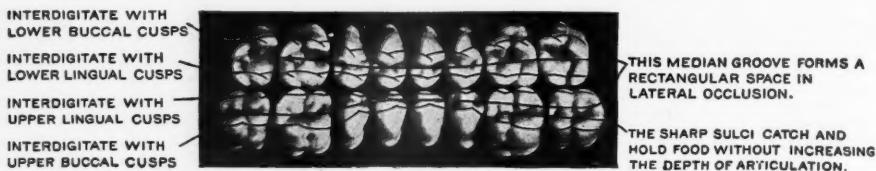


FIG. 3

Detailed formation of occlusal surfaces of one of the Anatomical Moulds of The Dentists' Supply Co. Every part of each surface is carved to exact articulation with those parts of the opposing teeth which antagonize it in occlusion and articulation.

That the sulci are rather sharp does not necessarily mean that the cusps are dangerously deep. But such sulci may be made to aid greatly in grinding the food.

The sulci in the anatomical moulds of The Dentists' Supply Company are important to the greatest efficiency of the teeth. But the articulation is not deep, nor do the teeth tend to "hit."

The Form of the Cusps

Every good thing can be overdone and spoiled thereby. Because artificial teeth are used most by people of middle age is no sign that the middle age form of teeth should be followed to an extreme. Very flat and rounding cusps will not grind food without the exercise of greater power than can be imparted to dentures. Flat teeth may be very easy to set. They may articulate very easily. But if the surfaces are on the lines of broad curves, they will have less grinding power. It is like cutting with the flat side of a knife. And grinding power is what patients need above all else.

Continued on next page

Continued from preceding page

The surfaces of the anatomical moulds of The Dentists' Supply Company are just rounding enough to make them set easily and slide easily, while giving them efficient grinding power. The more you study these teeth, the more you will see that **they are the result of a knowledge of the requirements and how to meet them.**

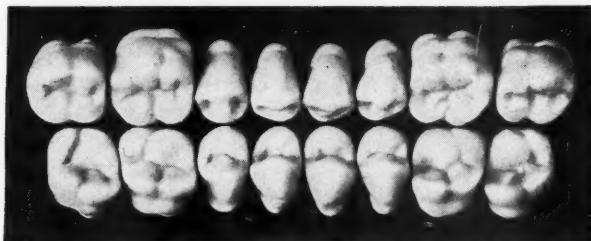


FIG. 4

Slightly enlarged view of occlusal surfaces of one of the Anatomical Moulds of The Dentists' Supply Co., showing detailed formation. When these teeth are placed in the position outlined in Illustration No. 2, they form a large rectangular groove into which they lock the food. Here it is crushed.

The Essentials of Grinding Power in Teeth

may be summarized as follows:

Correct mesio-distal relations between uppers and lowers.

Correct interdigititation of buccal and lingual cusps.

A rectangular groove of good size in lateral occlusion.

Cusps with good grinding power.

Properly formed sulci.

You will find all these requirements better met in the anatomical moulds of The Dentists' Supply Company, than in any other artificial teeth.

These teeth may be had in

TWENTIETH CENTURY TEETH AND DENTSPLY COMBINATION SETS

of leading dealers in all parts of the world.

THE DENTISTS' SUPPLY COMPANY

47 - 65 WEST FORTY-SECOND STREET

NEW YORK, N. Y.

More Artistic Dentures

can be made by the use of
Assortments Nos. 610, 710, 1010, 1210, in

Twentieth Century Teeth, plain vulcanite
Twentieth Century Combination Sets
Dentply Combination Sets
Solila Combination Sets

than any other arrangements of teeth easily obtainable.

The reasons are that the colors in the front teeth are soft and natural, and the bicuspids and molars are darker in shade. This darkening of the posterior teeth greatly heightens the aesthetic effect of the restoration.

Your dealer can supply any of these assortments.





They Won't Tell You

Your patients have a perfect right to be particular. When they see you throwing soiled cotton on the floor, they won't tell *you*, but prospective patients will hear something like this: "Don't go to Dr. Blank—he's careless, etc."

Use the

ASEPTIC Cotton Receiver

and your patients will *know* that your methods are clean.

\$1.00 is the Price

LEE S. SMITH & SON CO.
PITTSBURGH, PA.

TROW PRESS, NEW YORK

An Important Series of Articles

by
Professor Alfred Gysi

PROFESSOR GYSI is recognized in Europe as one of the leading exponents of dental science. He is probably the greatest living authority on the science of articulation.

In collaboration with Dr. Clapp, Professor Gysi has prepared a series of articles for publication in **THE DENTAL DIGEST** beginning with January, 1913. These articles are easy reading and give such portions of the science of articulation as can be easily understood and practically applied. They deal with subjects which should be familiar to every dentist. Don't miss the first article. Make sure your name is in for the January **DIGEST**.



An Article on Dental Reciprocity

A prominent dentist has written for the January number of **THE DENTAL DIGEST**, a strong article on the folly of the prevailing attitude toward interchange of dental licenses between states. The editor has expressed a willingness to take up the cause of reciprocity, if he only knew how to go about it. This subject may interest you some time. There can be little doubt that the present attitude toward reciprocity arises more from professional narrowness and selfishness than from any other cause.

You should at least read this article.

THE DENTAL DIGEST for 1913 will contain many other good things. It is the "free lance" magazine. It is not the organ of any society or clique. If you want to secure the above articles, enter your subscription now. No promises can be made that you can get even the January copy after January.

THE DENTAL DIGEST for 1913, with free premium book, \$1.00; Canada, \$1.40; Foreign, \$1.75.

The Dentists' Supply Co.
47-65 West 42d St., New York

The DENTAL DIGEST



DECEMBER 1912
VOL. XVII NO. 12

EDITED BY
GEORGE WOOD CLAPP, D.D.S.
PUBLISHED BY
THE DENTISTS' SUPPLY CO.
47-65 WEST 42ND ST., NEW YORK

PAINLESS OPERATING WITH A SIMPLE APPLIANCE

THE day of painless operating in dentistry is here. So many of the younger men are mastering the art, that every dentist must practise it. Patients are no longer willing to be hurt for the excavation of sensitive cavities, the removal of live pulps, the opening of inflamed teeth, and many other operations which can be easily made painless.

Patients willingly pay to be spared pain. No one getting into a dental chair with dread and getting out with comfort and pleasure, begrudges the additional fee that kept away the pain. There are some things for which the American public gives up money readily; greatest among them is to avoid suffering pain.

Of all the methods by which analgesia during slight operations or anesthesia during severe operations can be induced, the most satisfactory is



THE DE FORD INHALER AND SOMNOFORM

The inhaler is shown here. It is simple, compact, always ready, highly efficient. By it any degree of analgesia or anesthesia can be induced. *The patient can be spared all pain.*

The well-known benefits of Somnoform are secured: tranquillity of the patient, freedom from suffocation, nausea and headache; and prompt and complete recovery. *Patients are enthusiastic in praise of its effects.*

**De Ford Inhaler, complete \$25.00
12 Tubes Somnoform . . . 2.50**

ORDER OF YOUR DEALER

E. de TREY & SONS

28 South Forty-fifth Street ∴ ∴ Philadelphia, Pa.

Editor's Corner

An Important Series of Articles by Professor Gysi.

I HAVE just finished working with Prof. Gysi on a series of articles for this magazine. The first article will appear in the January issue.

Prof. Gysi is better known in Europe than in this country. He contributed to *The Dental Cosmos* in 1910, a series of articles on The Problem of Articulation, which have become classics. In my opinion Prof. Gysi knows as much about the problem of articulation as any living man, and he is doing more to solve it practically than anybody else.

The titles of the first two articles are :

Simplifying The Correct Articulation of Artificial Teeth.

What the Rotation Points of the Mandible are, and Why They Are Important In Articulation.

These articles are practical in the true sense of the word. They impart knowledge which each of us needs and which each of us can apply when the whole subject has been laid before us. You cannot afford to miss one of them. If your subscription for 1913 has not been placed, you will do well to place it at once. We cannot promise to supply back numbers, and some time you will want these articles.

My collaboration is literary. Dr. Gysi speaks German, French and English and writes German and French fluently. He desired that these articles should be put into the easy running English which characterizes this magazine. And I have studied with him, worked with him and written with him to that end. THE DENTAL DIGEST will be the medium of his English publications in the future.

The Magazine in 1913.

I believe it is customary for editors to make an announcement at this season that their magazines will be better in the year to come than in the year that has gone. I'm only going to say that I shall try to make THE DIGEST better next year, and the first evidence of that intention is found in the articles by Prof. Gysi mentioned above.

Editor's Corner

As I have explained before, the success of the magazine is dependent on the readers. Mr. Wilson has been teaching us that a government consists of more than a President; and a magazine consists of more than an editor. My position with reference to this magazine is different from that of the editors of any other big dental magazine. There is no big society behind this magazine —nor any society in fact. I make no effort to participate in dental politics. I'm trying to publish a helpful magazine for plain, ordinary dentists like myself—for the men who may or may not have been graduated from dental colleges, but who have taken full collegiate and postgraduate courses in the University of Hard Knocks.

But I must make the magazine self-supporting. That is, it must bring in as much money as it costs to produce—and about 75% of that money must come from the advertisers. It can come from them in just one way. If you care enough about the magazine to give advertisers in it preference and mention THE DIGEST when you write, the money will come in. Otherwise it will not. The advertisers will pay willingly if they know it is THE DIGEST that produces the returns. Otherwise they cannot afford to.

Last year I spent a little more money for illustrations than I should have—but I wanted you to have plenty of them and have them good. This year we need about six more pages of advertising to enable me to keep up to last year's standard. If you mention THE DIGEST when you write advertisers, other advertisers will be glad to come in.

I'll do my best for you anyway. But it will be a better best if you help this much. And there are such good things possible that the very best will be none too good.

Please remember to mention THE DIGEST.

GEORGE WOOD CLAPP.

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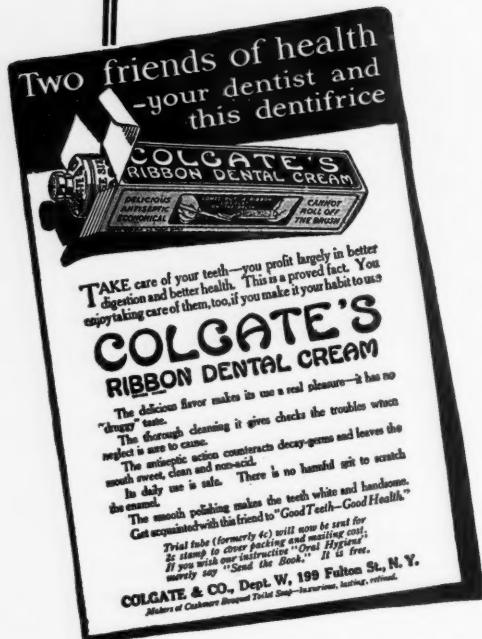


"Sing we all merrily,
Christmas is here,
The day that we love best
Of days in the year.

"Bring forth the holly,
The box and the bay,
Deck out our cottage
For glad Christmas Day.

"Sing we all merrily,
Draw around the fire,
Sister and brother,
Grandson and sire."

"Carols and Poems from the Fifteenth Century to
the Present Time"—A. A. BULLEN, B.A.



This advertisement (much larger) appeared in the Saturday Evening Post and other publications.

"Take care of your teeth"

The close and vital connection between the teeth and the general health—that is the one great argument that we use in advertising our Ribbon Dental Cream to the public.

We urge its use because we know it is a good dentifrice—one that helps to protect your work.

We shall be glad to learn your opinion of this educational advertising.

Our booklet, "Oral Hygiene," should be on your reception-room table for your patients to read. Write us how many you wish.

COLGATE & CO.

Dept. 21

199 Fulton Street

New York

LISTERINE

LISTERINE is a fragrant non-toxic antiseptic composed of volatile and non-volatile constituents, agreeable to the taste, refreshing in its application and lasting in its antiseptic effect.

Listerine is of well-proven value in the antiseptic treatment of all parts of the human body, whether by spray irrigation, atomization or simple local application, and is well adapted to the requirements of general

DENTAL PRACTICE

To cleanse and deodorize before operating ;
To wash and purify the mouth after extracting teeth ;
To treat antiseptically diseases of the mouth ;
To prescribe as a detergent prophylactic mouth wash
for daily use in the care and preservation of the teeth.

The prompt action of Listerine in cleansing and purifying the mucous surfaces, and its cooling, refreshing effect upon the tissues is very grateful to the patient. Listerine has received the highest recognition as the best general antiseptic for a Dentist's Prescription.

THE DENTIST'S PATIENT A leaflet designed to convey useful information respecting the care of the teeth. Supplies of this interesting treatise on oral hygiene are furnished free of expense to dental practitioners for distribution among their patients. A specimen copy, together with an order-form, will be sent upon request.

LAMBERT PHARMACAL COMPANY
LOCUST AND TWENTY-FIRST STREETS, ST. LOUIS, MISSOURI

Be assured of genuine Listerine by purchasing an original package

Comparison Will Quickly Show You Why the Anatomical Moulds of The Dentists' Supply Co. are Superior to Others

Once upon a time, when Daniel Webster was defending a case, he was opposed by a lawyer who tried to mislead the jury as to the quality of some stolen goods, which were before their eyes. Webster made no long defense. He merely said to the jury: "Just look, gentlemen, just look." If you will just look, you can very quickly see certain important differences between our anatomical moulds and those which competition has forced other manufacturers to offer.

Just Look at the Occlusal Surfaces

The first impression when one looks at the occlusal surface of our anatomical moulds is that of "character," that is, that the surfaces have been intelligently and painstakingly designed for efficiency. That is perfectly true. Now let us look at what makes efficiency, in artificial bicuspids and molars.

What Efficiency in These Teeth Means

Just three things.

The ability to catch the food to be ground.

The ability to hold that food while the jaws are coming together to crush it.

The ability to "cut it up"—to triturate it.

Each of these three requirements demands something in teeth. If that something is not there, the teeth may do other things, but they will be unable to do these things.

What Efficiency Demands in Teeth

For the sake of brevity, put together the power to catch the food and to hold it, for the holding is really a continuation of the catching.

The catching and holding demand "retentive surfaces," that is, surfaces from which the food is not easily pushed away. When the jaws begin to come together there is a natural tendency for the food to be pushed out from between the approaching surfaces. If the surfaces are not designed to hold the food, a considerable portion of it will be pushed away from the teeth in spite of the action of the tongue and cheeks.

Surfaces that are to hold the food must have deep enough sulci so that the food will be caught by them, that it will be

pressed into them as the jaws come together, and will be held there. If these sulci are scientifically constructed, they will hold much more food than one would believe possible. But if they are so shallow or have such shallow walls that they do not have real character, the food is not held by them. And it gets away uncrushed. You can see the force of this by carrying it to the extreme in the case of teeth ground flat, which do not hold at all or grind it well.

Now compare the illustrations of these occlusal surfaces in our anatomical moulds with the same surfaces in the copied moulds. If you have any of the teeth, compare them; that is better yet.

This is One of the Anatomical Moulds of The Dentists' Supply Company

It is Scientifically Designed to Catch, Hold and Really Grind Food. The Other Moulds are Like it in this Respect

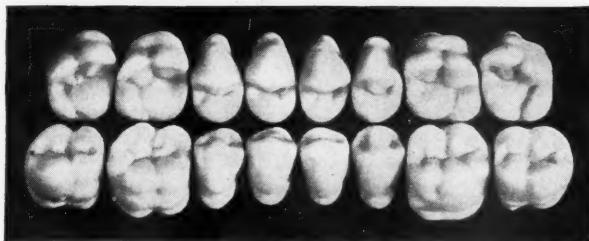


Illustration slightly enlarged to better show markings.

The occlusal surfaces of these teeth are designed to catch, hold and crush food. They do it more effectively than any other porcelain teeth. Note the character in the fossae and sulci

You will find in the occlusal surfaces of our teeth sulci capable of holding the food and of exerting no small influence on its grinding. In the copied teeth you will find practically no sulci at all, or at least only lines as the margins of cusps. You will find nothing to hold the food so that it can be ground. On the contrary you will find everything made easy for the escape of the food to one side as the jaws come together. Teeth so made are inefficient because of faulty design.

You will understand the reasons for this faulty design easily enough. The other manufacturer didn't want to introduce anatomical moulds. They were going along well enough as they were. They had excellent businesses on established lines. And when we introduced anatomical moulds, they pooh-poohed it as long as they could. But when the dental profession heartily endorsed the anatomical moulds and refused to buy their "old moulds," even at lower prices, it became necessary for these manufacturers to have anatomical moulds and have them at once.

These are Two of the Moulds Offered in Competition with Our Anatomicals



The formation of the occlusal surfaces of the lowers is so shallow and without character, that the teeth cannot be efficient in holding the foods which need real grinding. Compare these with the formations in the other illustration.

Now, if you must have a thing in a hurry, the shortest route to getting it may be the best. Here was the need of these manufacturers to have anatomical moulds at once. Here were our moulds in the market, heartily approved by the profession and selling like hot-cakes. What could be simpler than to produce duplicates and sell them.

You see these manufacturers couldn't afford to do what we had done. We had begun while everybody else was pooh-hooing the matter and had devoted the necessary study to the reproduction of proper tooth-forms. We made our mistakes quietly and as quietly corrected them. And when we offered you teeth it was as the result of a knowledge of what we were doing. But when the others began to copy they didn't have our knowledge. And they made their mistakes in public. You can buy them almost anywhere.

One of their mistakes was in not giving efficiency to the occlusal surfaces of their bicuspids and molars. You can see it by examining the teeth. If you will hold one hand open, palm up, so that a rather deep dish is made of the palm, you will have a form that will hold substances. That is something like the form of the occlusal surfaces in our anatomical moulds.

Now if you straighten out that palm you will have a very shallow dish, that will hold very little against a force which tends to push it out at the side. That is like unto the occlusal surface in the copied moulds.

How We Stole a March on the Other Tooth Manufacturers

There has been preached in the dental profession, since the memory of man runneth not to the contrary, the gospel of "aging artificial teeth," that is, grinding off the cutting edges of the anteriors so that they shall look like the teeth of the age of the patient.

One of the best jokes of the decade is the story of how the manufacturers who preached this loudest, fooled themselves with it.

Every dentist knows that artificial teeth may be modified to suit the individual requirements of the patient in hand. Sometimes this requires the grinding off of the incisal edges of the anteriors and of deforming them in other ways as they would be deformed by wear.

But that doesn't apply to the back teeth. And when it is done to artificial bicuspids and molars their efficiency is lessened.

What is needed in artificial back teeth is power to cut up the food. What is needed for the cutting up of the food is a series of relatively sharp cusps passing one over the other in proper contact and great force. The sharper the cusps in reason, the better will be the cutting power of the teeth. And the greater the cutting power of the teeth, the greater their efficiency from the patient's point of view.

You may secure the more efficient porcelain teeth known by ordering

Twentieth Century Teeth, plain vulcanite
Twentieth Century Combination Sets, plain vulcanite
Dentsply Combination Sets, plain vulcanite
Solila Combination Sets, plain vulcanite

THE DENTISTS' SUPPLY COMPANY

SOLE MANUFACTURERS

47-65 West 42d Street

New York, N. Y.

WE WILL GIVE YOU Brother Bill's Letters

IF YOU SUBSCRIBE FOR THE DENTAL
DIGEST FOR 1913

Vol.
II

Last year we gave away over 12,000 copies of the first volume of Brother Bill's Letters to our subscribers in all parts of the world. We have frequent calls for it even now.

The second volume promises to be even more popular. Everybody wants it. Subscriptions are coming rapidly. One agent has already sent in over one hundred. All subscribers want Brother Bill. One Ohio subscriber renews and says: "I sure want a copy of Brother Bill's Letters, Volume II. Volume I did me more good than any book I ever read pertaining to my profession." A dentist in New Hampshire writes: "I would not be without THE DIGEST, even if it cost \$12 a year. Since reading Brother Bill's Letters I have raised my prices 50 per cent. and find that people appreciate good work at good prices. I am doing 50 per cent. more work since Brother Bill's "Big Idea" struck me.

Brother Bill's second volume contains twelve of his letters, one of which was published for the first time in this book. We give it free, with THE DENTAL DIGEST, 1913, all for \$1.00; to Canada, \$1.40; foreign, \$1.75.

This book is not for sale. It is given free with a year's subscription, and can be obtained in no other way.

That Unpublished Brother Bill Letter

is red hot, so hot in fact that the editor of THE DIGEST decided not to publish it in the magazine. Dentists who are opposed to Brother Bill's teachings are already sufficiently up in arms. It is not worth while to stir them up any more. This letter would do it. It may even prove pretty strong for a good many who have read his previous writings with pleasure and profit.

Books will be mailed in the order the sub-

scriptions are received. Last year, when we announced the premium, it was ordered in such quantities that we were for a time unable to keep up with the demand. We'll do our best to ship promptly, but it will be first come, first served. So if you want the book soon, just hand your subscription to your favorite salesman or send it to us and tell us through what dealer to charge it.

October, November and December, 1912, copies free, as long as they last, to new subscribers, together with the free premium book on an order for a 1913 subscription at \$1.

The Dentists' Supply Company 47-65 West 42d Street
New York City

1048-10-12

Practice Building Crown Selections

Tooth colors are not what they sometimes appear at first glance. They are so soft and subtle that it is easy to confuse a gray with a blue or sometimes even a gray and a yellow. But the dentist who wishes to make a reputation as a skilled worker cannot afford to make such mistakes, especially when selecting porcelain crowns to be placed beside remaining natural teeth. He must have his grays gray, and his blues blue and his yellows yellow.

No other method of reaching this end equals having the crowns themselves at hand so that the very crown to be used can be selected "in the mouth." It can then be seen in the contrast with the patient's hair, eyes, skin, and remaining teeth. In that position it looks entirely different than it does out of the mouth.

Of course it is better to have the depot send you half a dozen crowns for selection than not to have any, but that is not equal to having 100 or even 50 crowns from which to select just that one which best meets all the requirements.

A Very Valuable Office Stock of Crowns

is comprised in Assortments No. 1 and No. 2, shown here. These Assortments of 100 crowns each differ in mould and shade, so that one of them supplements the other. Between them, they furnish crowns to meet most of the requirements of practice. Dentists who have become accustomed to their use are so favorably impressed, that no small part of the crown business is taking this form.

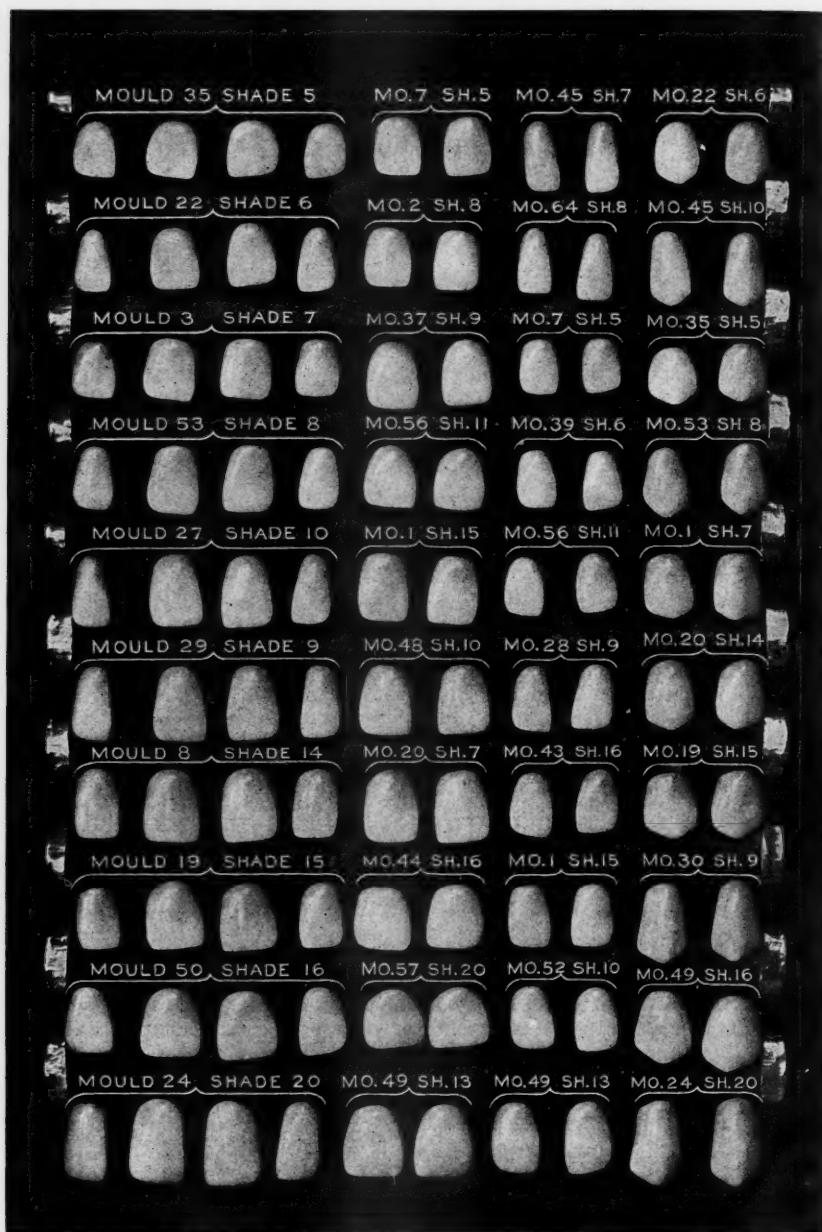
Do Not Leave Crown Selections to Another

You are the one who can select best—and your reputation depends on the appearance of the crown when it is in the mouth. No assistant who cannot do the work in the mouth can select so well as you. No clerk in a depot who has not seen the case can be expected to select, even if you give him a shade number, nearly as well as you can who are "on the spot." There are many things which assistants can do well, but those matters on which your reputation depends should receive your personal attention. And if Mrs. Jones can say, "Dr. Blank put that porcelain crown on ten years ago, and I don't believe one person in twenty knows it is not my own," you've won one of the best practice-building advertisements possible to get—the kind money doesn't buy.

Why Such Selections Are Possible With These Crowns

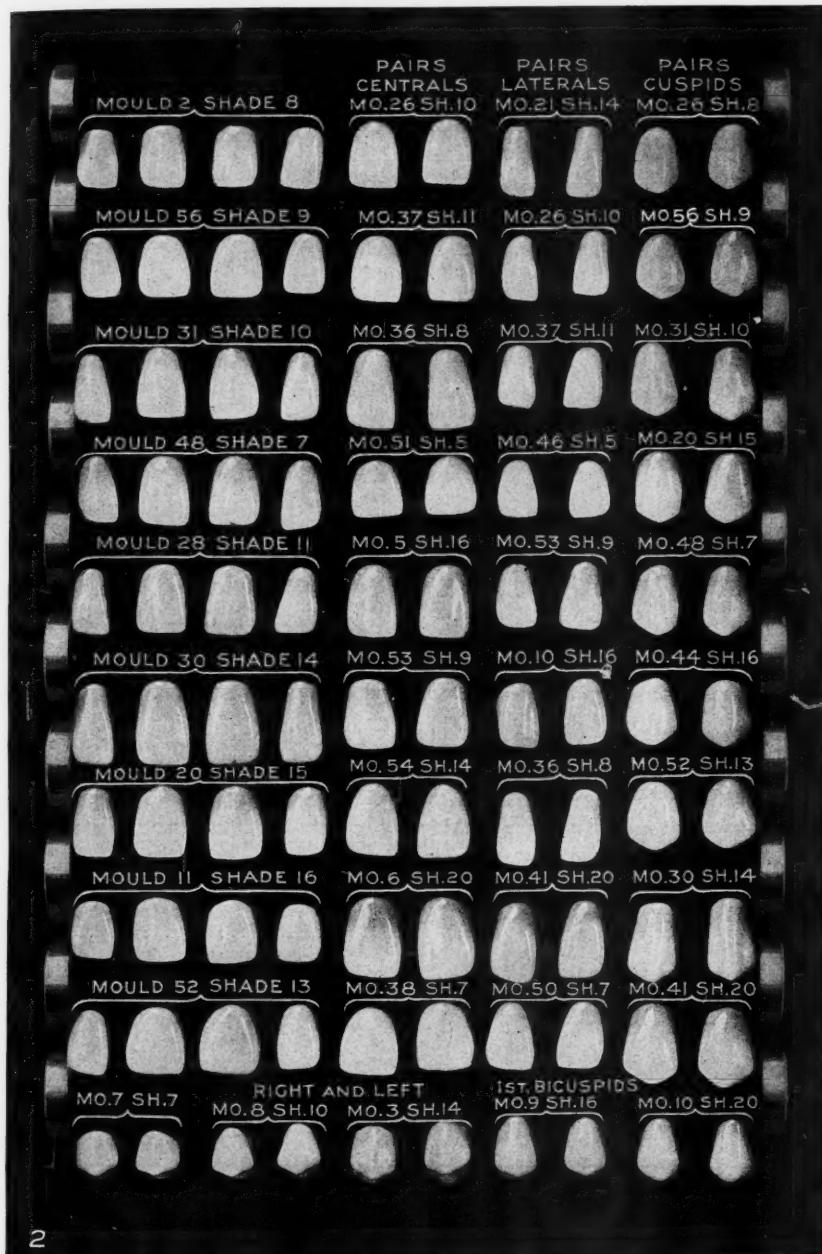
Because they are shaded in the same way nature shades teeth, by the strong color being placed in the dentine and covered with a translucent, lightly-colored enamel. The blending of the two shades gives the soft tones seen in natural teeth. It is almost like matching natural teeth with natural teeth.

CROWN ASSORTMENT NUMBER 1



Continued on next page

CROWN ASSORTMENT NUMBER 2



Such Selections Save Money

Some dentists seem to think that the longer they keep a patient waiting the more highly that patient esteems them. That is a mistake. They say the Turkish emperor used to keep people waiting a day or two just to impress his importance. That isn't the American way. It's better to have folks say "Go to Dr. Blank. He can fix you up promptly and well." These assortments equip you to earn such remarks.

Then, too, it's really cheaper to have the crown at hand than it is to take impressions and make models. They take time—your time which is your money—without increasing the income. You can often select a crown in less time than it would take to get the model—and, of course, better.

These Assortments on Approval

Most dealers are glad to sell these assortments on 30 days' approval. That gives you a chance to see how advantageous the assortments are. It's something like the way clocks were sold years ago. The dealer "just left it" for a while. It proved to be such a convenience, the family couldn't get along without it. We are so convinced of the advantages of one or both assortments, once you try them, that we are glad to make the trying easy.

Just fill in the coupon below and send to us, taking care to specify which kind of crowns you desire. If you want to be in position to develop crown practice which is profitable when properly handled, try both assortments.

The Dentists' Supply Co.

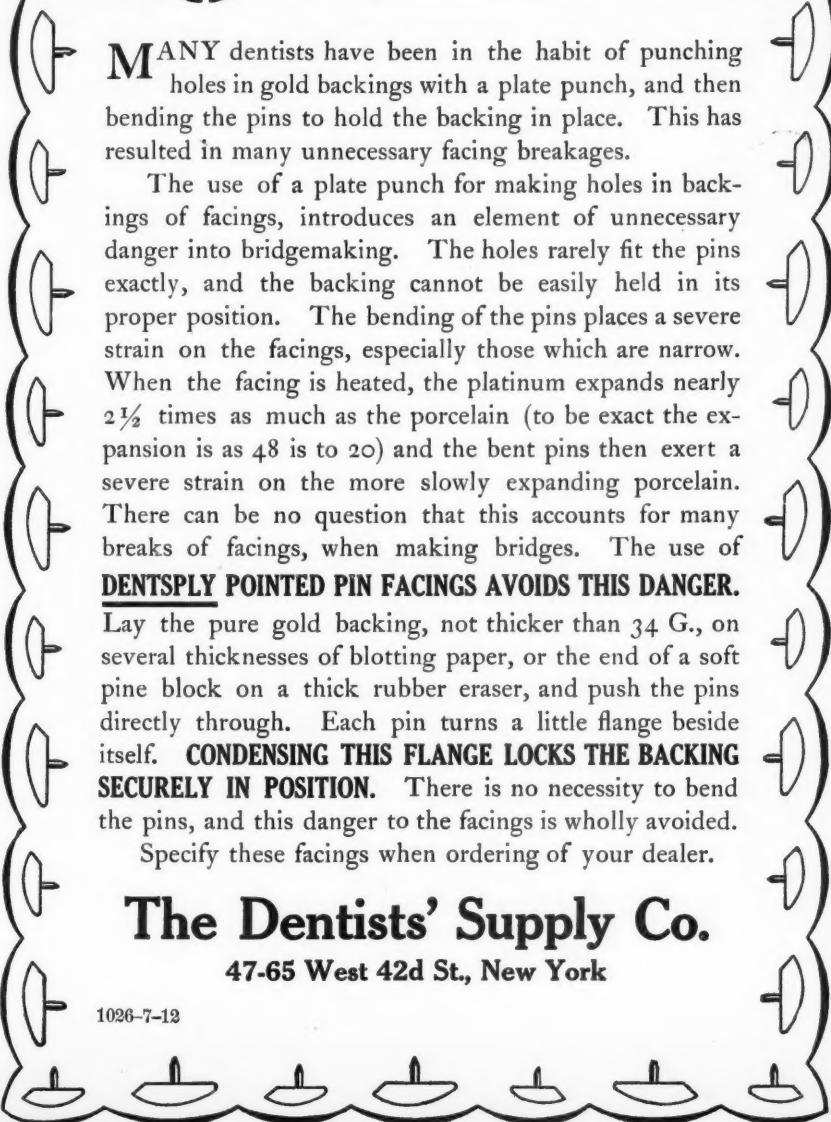
47-65 West 42d St., New York.

Send me through my dealer, whose name is.....

Name.....

Address.....

Avoid Facing Breakage by using Dentsply Pointed Pin Facings



FMANY dentists have been in the habit of punching holes in gold backings with a plate punch, and then bending the pins to hold the backing in place. This has resulted in many unnecessary facing breakages.

The use of a plate punch for making holes in backings of facings, introduces an element of unnecessary danger into bridgemaking. The holes rarely fit the pins exactly, and the backing cannot be easily held in its proper position. The bending of the pins places a severe strain on the facings, especially those which are narrow. When the facing is heated, the platinum expands nearly $2\frac{1}{2}$ times as much as the porcelain (to be exact the expansion is as 48 is to 20) and the bent pins then exert a severe strain on the more slowly expanding porcelain. There can be no question that this accounts for many breaks of facings, when making bridges. The use of

DENTSPPLY POINTED PIN FACINGS AVOIDS THIS DANGER.

Lay the pure gold backing, not thicker than 34 G., on several thicknesses of blotting paper, or the end of a soft pine block on a thick rubber eraser, and push the pins directly through. Each pin turns a little flange beside itself. **CONDENSING THIS FLANGE LOCKS THE BACKING SECURELY IN POSITION.** There is no necessity to bend the pins, and this danger to the facings is wholly avoided.

Specify these facings when ordering of your dealer.

The Dentists' Supply Co.

47-65 West 42d St., New York

1026-7-12



Dentsply Crowns Are “Dentsply Quality”

“Dentsply Quality” stands for something tangible.

It means that whatever bears that name has been tested and is vouched for by The Dentists’ Supply Co.

“Dentsply Quality” means a quality not excelled by that of any similar product in the market.

Dentsply Crowns Have Detached Posts

In many cases this is a great advantage.

The crowns are made in over seventy moulds, giving an unequalled variety to select from. No matter how difficult the case, a suitable crown can be quickly selected. When fitted, the crown will perfectly resemble the natural teeth beside it, because of the fine quality and translucency of the porcelain of which it is made, the celebrated Twentieth Century Porcelain.

The Dentsply Crown is all that can be desired in material, mould and shade.

The post is made with the special view of fitting the root of the tooth and at the same time having ample strength. It will not bend or stretch under the force of occlusion.

Crown and Post each meet every requirement of the most exacting dentist who wants a detached post crown.

N. B.—Dentsply Crowns have Detached Posts.

Twentieth Century Crowns have Fixed Posts.



Brooklyn Branch
5 Willoughby St.

Newark Branch
1005 Essex Bldg.



"YOU CAN'T FOOL ME ON ARTIFICIAL TEETH

"I've used every known make in large quantities. I keep 2000 X14 always on hand.

"I know from actual experience that genuine Twentieth Century Teeth are the best vulcanite pin teeth made. In 90 cases in 100 they stand till the strain becomes so great it breaks the porcelain. In 90 cases in a 100 platinum pins stretch and finally break, before the tooth gives way. Baked-in composition pin teeth aren't worth a _____. "

These are the exact words of one of the largest users of artificial teeth. He speaks from long experience. He has used Twentieth Century Teeth eight years and of the 2000 sets in his office 1990 are Twentieth Century Teeth.

Note that he speaks thus of genuine Twentieth Century Teeth.

If you will buy of a reputable dealer, so that you get the genuine Twentieth Century Teeth, your results will be pleasing also.

Be sure to get the genuine

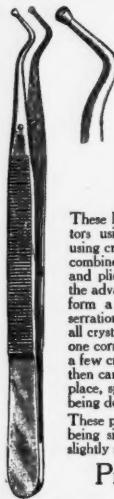
Twentieth Century Teeth

The Dentists' Supply Company

47-65 West 42d St. SOLE MAKERS New York

1041-10-12

De TREY'S Gold Plugging PLIERS



*Designed to simplify
the manipulation of
Dental Golds and
especially of Crystal
Golds.*

Suggested by Dr. H. C. Register

These Pliers will be found very useful for operators using gold foil, and indispensable to those using crystal golds. In one instrument has been combined the distinct advantages of both plunger and pliers. As a pair of pliers, they possess all the advantages of such, and when closed the ends form a round headed plunger point with fine serrations, such as is used in the manipulation of all crystal golds. The piece of gold is seized by one corner, or better, in its center, taking hold of a few crystals, "picking it up by the hair". It is then carried to the cavity and firmly pressed into place, spreading and partly condensing it, all this being done with one instrument.

These pliers are made in two sizes, the larger size being similar to our No. 7 point, and the other slightly smaller than our No. 7 point.

Price, per pair, \$1.85

E. de TREY & SONS, 28 South 40th St.
Philadelphia, Pa.

De TREY'S NEW Crystal Fiber Gold

Supersedes our Crystal Mat Gold. Is a vast improvement over all other forms of sponge gold. Does not crumble. It "feels like wax" under the plunger. The cavity preparation is the same. It can be worked entirely by hand pressure and when properly condensed will give a dense, even and durable filling of beautiful color, with perfect adaptation to the walls and floor of the cavity. Order 1-40 oz. for a trial.

PRICES

1-40 oz.	.	.	\$1.00
1-16 oz.	:	:	2.15
1-8 oz.	:	:	4.25
1-2 oz.	:	:	16.00
1 oz.	:	:	32.00

E. de TREY & SONS, 28 South 40th St.
Philadelphia, Pa.

DeTrey's Hand Pluggers and Cone Socket Points

In working De Trey's Crystal Fiber Gold by hand pressure, with these instruments, three objects of primary importance are accomplished.

First: greater density is secured. The points are made slightly convex, with only a small part of the point bearing on the gold at any one time. This concentrates the pressure at the point of contact and the force is much greater than could ever be gotten from the blow of a mallet.

Second: by giving the rotary rolling motion with the point, even density is secured. No danger of pits.

Third: they are easier on the patient, if the teeth are sensitive or the walls frail.

PRICES

Hand Pluggers	:	\$1.50 each
Cone Socket Point	:	1.00 each
Cone Socket Handles	:	.50 each
Double Ended Pluggers	:	2.25 each

E. de TREY & SONS, 28 South 40th St.
Philadelphia, Pa.

De TREY Matrix Metal

This metal is a platinized Gold. The presence of platinum raises the fusing point, and also makes the matrix less liable to warp. This will be found valuable for matrices for low fusing porcelain, and inlays made of 22-carat gold. With care, it may also be successfully used as a matrix for pure gold inlays.

PRICE

1-2 dwt., \$1.00

E. de TREY & SONS, 28 South 40th St.
Philadelphia, Pa.

Simple to Operate

THE AUTOMATON

Proves its value at once. No need for clamps or rubber dam. Worth many times its cost to any busy dentist. Can be applied almost instantly to any tooth in the lower jaw. Controls the tongue, holds cotton or paper rolls in place, keeps the operating space dry, and gives the dentist both hands free to work with. *Saves time, labor and rubber dam.*

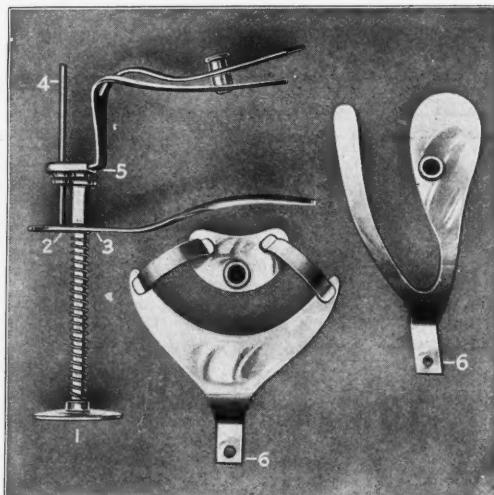


Pleases the patient. Great advantage when cleaning the lower incisors.

Fully guaranteed as to its practical working capacity. Sold on a Money-Back Guarantee.

**Price Per Set
\$5.00**

Set consists of right, left and anterior.



DIRECTIONS

Place thumb upon pressure plate 1, index and middle-finger upon chinplate at 2 and 3 respectively; press together until guider 4 is withdrawn from slot 5; insert mouthpiece 6, suitable to the case, into open slot 5; release pressure, thereby automatically locking mouthplate 6, before introducing into the mouth.

E. DE TREY & SONS, Selling Agents
28 South 40th Street, Philadelphia, Pa.

Bargains in Second-Hand Goods

		Regular Price	Selling Price
1 Harvard Chair, Maroon Plush, No. 6, <i>New Model</i> (New) Special		\$200.00	\$160.00
1 Harvard Electric Engine, Style 20, D. C. Copper oxidized with No. 7 Handpiece and Duplex Attachment (New)		109.50	85.00
1 S. S. W. Cabinet, Oak		85.00	35.00
1 Clark New Model Cuspidor (Nearly New)		50.00	45.00
1 Clark Double Bowl		50.00	32.50
1 R. & R. Cabinet No. 35 Golden Oak		90.00	40.00
1 Russell Switchboard, R. C. A. (Onyx)		110.00	70.00
1 Special Work Bench. (Mahogany).			45.00
1 Long's Gasometer (Complete)		67.00	45.00
1 Imperial Chair, Pigskin		232.00	165.00
3 Harvard Table Brackets @			7.00
1 Wilkerson Chair, M. P., Leg Base		125.00	55.00

THE DENTISTS' SUPPLY COMPANY

47-65 West 42d Street, New York City

The Prevention of Dental Decay

calls for careful attention to the eliminative functions, since it has been definitely shown that the accumulation in the system of the poisons produced by intestinal putrefaction leads to all manner of dental disease. For securing bowel regulations and thorough intestinal elimination, there is nothing that the dentist can employ with such complete satisfaction as

Prunoids

(Edible Tablets)

This noteworthy preparation is not only surprisingly effective in its capacity for stimulating bowel activity, but it is remarkably free from all disagreeable after-effects such as griping, reactionary constipation, or tendency toward hemorrhoids. In fact, its whole action is physiological, since it produces its effects solely through stimulating the natural intestinal processes.

Clinical experience has demonstrated conclusively that Prunoids are especially serviceable to the dentist in his efforts to restore and maintain hygienic conditions of the body.

Samples on request

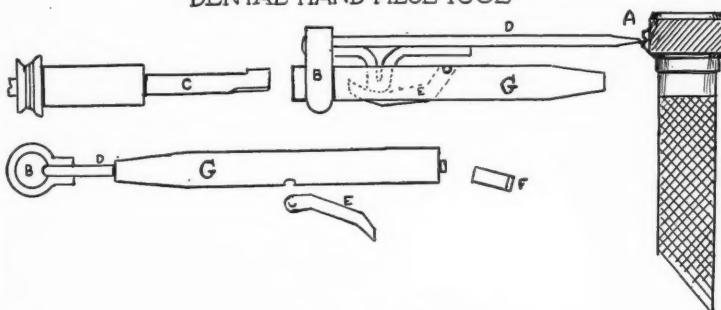
For sale by all druggists

THE SULTAN DRUG CO.
St. Louis, Mo.



This tool will enable you to repair a handpiece quicker and easier than you thought possible

SMILING JIMMIE DENTAL HAND-PIECE TOOL



INSTRUCTIONS

1. To remove outer casing of handpiece, use screwdriver end of D at screw A.
2. Pull stem C out as far as it will go. This exposes spring E, and admits tool.
3. Pass loop B over G, bringing tool extension down onto spring E, as shown in cut C, and E may now be removed.
4. Push D through G to remove F.
5. To reassemble: Replace F, then the spring E, after which "Smiling Jimmie" in position again as shown, C will enter its proper place. Replace outer casting and the operation is complete; thirty seconds does it all. It's clean, quick and economical.

Patent applied for

Price 75 cents

THE DENTISTS' SUPPLY CO.

47-65 West 42d Street, New York City

BROOKLYN BRANCH
5 Willoughby Street

NEWARK BRANCH
1005 Essex Building

It Doesn't Cost Any More To Use the Best Solders

A skillful gold worker recently made the band of a molar two-piece gold crown and computed the extra cost to him by using Ney's Gold Solder rather than some competition solders offered at lower prices.

He soldered the band, then the cap to the band, using Ney's 22k gold plate and Ney's Solder for 22k plate. His report is as follows:

"I feel sure it didn't cost me any more to solder the band and band and cap with Ney's Solder for 22k plate, because I was able to use extremely small particles, much smaller than I could pick and place with tweezers. I used a No. 3 Sable brush, painted a little flux along the joint, laid a tiny piece of solder across the seam inside the band, applied gentle heat on the outside, and soon had a beautiful and invisible joint. The tiny piece of solder flowed clear through the joint. My experience with lower grade solders shows that they will not flow this way, that I must use more solder, and that I don't get as good a joint."

This dentist showed good judgment in selecting

NEY'S GOLD SOLDERS

because of their high quality. They have been standard for a century—since 1812. The quality has never been lowered to meet the demands of lower prices or great profits.

You may be sure of the same high quality of *service* from them that has made them the standards by which others are judged.

Insist on receiving them.

**THE J. M. NEY COMPANY
HARTFORD, CONN., U.S.A.**

